

SEQUENCE LISTING

<110> Brad St. Croix  
Bert Vogelstein  
Kenneth Kinzler

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<210> 177  
 <211> 757  
 <212> PRT  
 <213> Homo sapiens

<400> 177  
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 Gly Gln Asp Pro Trp Ala Ala Glu Pro Arg Ala Ala Cys Gly Pro Ser  
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 Ser Cys Tyr Ala Leu Phe Pro Arg Arg Arg Thr Phe Leu Glu Ala Trp  
 35 40 45  
 Arg Ala Cys Arg Glu Leu Gly Gly Asp Leu Ala Thr Pro Arg Thr Pro  
 50 55 60

Glu Glu Ala Gln Arg Val Asp Ser Leu Val Gly Ala Gly Pro Ala Ser  
 65 70 75 80  
 Arg Leu Leu Trp Ile Gly Leu Gln Arg Gln Ala Arg Gln Cys Gln Leu  
 85 90 95  
 Gln Arg Pro Leu Arg Gly Phe Thr Trp Thr Thr Gly Asp Gln Asp Thr  
 100 105 110  
 Ala Phe Thr Asn Trp Ala Gln Pro Ala Ser Gly Gly Pro Cys Pro Ala  
 115 120 125  
 Gln Arg Cys Val Ala Leu Glu Ala Ser Gly Glu His Arg Trp Leu Glu  
 130 135 140  
 Gly Ser Cys Thr Leu Ala Val Asp Gly Tyr Leu Cys Gln Phe Gly Phe  
 145 150 155 160  
 Glu Gly Ala Cys Pro Ala Leu Gln Asp Glu Ala Gly Gln Ala Gly Pro  
 165 170 175  
 Ala Val Tyr Thr Pro Phe His Leu Val Ser Thr Glu Phe Glu Trp  
 180 185 190  
 Leu Pro Phe Gly Ser Val Ala Ala Val Gln Cys Gln Ala Gly Arg Gly  
 195 200 205  
 Ala Ser Leu Leu Cys Val Lys Gln Pro Glu Gly Gly Val Gly Trp Ser  
 210 215 220  
 Arg Ala Gly Pro Leu Cys Leu Gly Thr Gly Cys Ser Pro Asp Asn Gly  
 225 230 235 240  
 Gly Cys Glu His Glu Cys Val Glu Glu Val Asp Gly His Val Ser Cys  
 245 250 255  
 Arg Cys Thr Glu Gly Phe Arg Leu Ala Ala Asp Gly Arg Ser Cys Glu  
 260 265 270  
 Asp Pro Cys Ala Gln Ala Pro Cys Glu Gln Gln Cys Glu Pro Gly Gly  
 275 280 285  
 Pro Gln Gly Tyr Ser Cys His Cys Arg Leu Gly Phe Arg Pro Ala Glu  
 290 295 300  
 Asp Asp Pro His Arg Cys Val Asp Thr Asp Glu Cys Gln Ile Ala Gly  
 305 310 315 320  
 Val Cys Gln Gln Met Cys Val Asn Tyr Val Gly Gly Phe Glu Cys Tyr  
 325 330 335  
 Cys Ser Glu Gly His Glu Leu Glu Ala Asp Gly Ile Ser Cys Ser Pro  
 340 345 350  
 Ala Gly Ala Met Gly Ala Gln Ala Ser Gln Asp Leu Gly Asp Glu Leu  
 355 360 365  
 Leu Asp Asp Gly Glu Asp Glu Asp Glu Asp Glu Ala Trp Lys Ala  
 370 375 380  
 Phe Asn Gly Gly Trp Thr Glu Met Pro Gly Ile Leu Trp Met Glu Pro  
 385 390 395 400  
 Thr Gln Pro Pro Asp Phe Ala Leu Ala Tyr Arg Pro Ser Phe Pro Glu  
 405 410 415  
 Asp Arg Glu Pro Gln Ile Pro Tyr Pro Glu Pro Thr Trp Pro Pro Pro  
 420 425 430  
 Leu Ser Ala Pro Arg Val Pro Tyr His Ser Ser Val Leu Ser Val Thr  
 435 440 445  
 Arg Pro Val Val Val Ser Ala Thr His Pro Thr Leu Pro Ser Ala His  
 450 455 460  
 Gln Pro Pro Val Ile Pro Ala Thr His Pro Ala Leu Ser Arg Asp His  
 465 470 475 480  
 Gln Ile Pro Val Ile Ala Ala Asn Tyr Pro Asp Leu Pro Ser Ala Tyr  
 485 490 495  
 Gln Pro Gly Ile Leu Ser Val Ser His Ser Ala Gln Pro Pro Ala His  
 500 505 510  
 Gln Pro Pro Met Ile Ser Thr Lys Tyr Pro Glu Leu Phe Pro Ala His  
 515 520 525  
 Gln Ser Pro Met Phe Pro Asp Thr Arg Val Ala Gly Thr Gln Thr Thr  
 530 535 540  
 Thr His Leu Pro Gly Ile Pro Pro Asn His Ala Pro Leu Val Thr Thr

545	550	555	560												
Leu	Gly	Ala	Gln	Leu	Pro	Pro	Gln	Ala	Pro	Asp	Ala	Leu	Val	Leu	Arg
				565					570					575	
Thr	Gln	Ala	Thr	Gln	Leu	Pro	Ile	Ile	Pro	Thr	Ala	Gln	Pro	Ser	Leu
				580				585					590		
Thr	Thr	Thr	Ser	Arg	Ser	Pro	Val	Ser	Pro	Ala	His	Gln	Ile	Ser	Val
				595			600		605				605		
Pro	Ala	Ala	Thr	Gln	Pro	Ala	Ala	Leu	Pro	Thr	Leu	Leu	Pro	Ser	Gln
	610				615				620						
Ser	Pro	Thr	Asn	Gln	Thr	Ser	Pro	Ile	Ser	Pro	Thr	His	Pro	His	Ser
	625				630				635				640		
Lys	Ala	Pro	Gln	Ile	Pro	Arg	Glu	Asp	Gly	Pro	Ser	Pro	Lys	Leu	Ala
				645			650		655				655		
Leu	Trp	Leu	Pro	Ser	Pro	Ala	Pro	Thr	Ala	Ala	Pro	Thr	Ala	Leu	Gly
				660			665		670						
Glu	Ala	Gly	Leu	Ala	Glu	His	Ser	Gln	Arg	Asp	Asp	Arg	Trp	Leu	Leu
				675			680		685				685		
Val	Ala	Leu	Leu	Val	Pro	Thr	Cys	Val	Phe	Leu	Val	Val	Leu	Leu	Ala
	690				695				700						
Leu	Gly	Ile	Val	Tyr	Cys	Thr	Arg	Cys	Gly	Pro	His	Ala	Pro	Asn	Lys
	705				710				715				720		
Arg	Ile	Thr	Asp	Cys	Tyr	Arg	Trp	Val	Ile	His	Ala	Gly	Ser	Lys	Ser
				725			730		735				735		
Pro	Thr	Glu	Pro	Met	Pro	Pro	Arg	Gly	Ser	Leu	Thr	Gly	Val	Gln	Thr
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Cys	Arg	Thr	Ser	Val											
	755														

<210> 178  
 <211> 278  
 <212> PRT  
 <213> Homo sapiens

<400>	178														
Met	Pro	Ala	Ser	Leu	Ala	Leu	Gln	Pro	Arg	Ala	Met	Met	Lys	Thr	
1				5				10				15			
Leu	Ser	Ser	Gly	Asn	Cys	Thr	Leu	Ser	Val	Pro	Ala	Lys	Asn	Ser	Tyr
					20			25				30			
Arg	Met	Val	Val	Leu	Gly	Ala	Ser	Arg	Val	Gly	Lys	Ser	Ser	Ile	Val
				35			40				45				
Ser	Arg	Phe	Leu	Asn	Gly	Arg	Phe	Glu	Asp	Gln	Tyr	Thr	Pro	Thr	Ile
				50			55			60					
Glu	Asp	Phe	His	Arg	Lys	Val	Tyr	Asn	Ile	Arg	Gly	Asp	Met	Tyr	Gln
				65			70			75			80		
Leu	Asp	Ile	Leu	Asp	Thr	Ser	Gly	Asn	His	Pro	Phe	Pro	Ala	Met	Arg
				85			90				95				
Arg	Leu	Ser	Ile	Leu	Thr	Gly	Asp	Val	Phe	Ile	Leu	Val	Phe	Ser	Leu
				100			105				110				
Asp	Asn	Arg	Glu	Ser	Phe	Asp	Glu	Val	Lys	Arg	Leu	Gln	Lys	Gln	Ile
				115			120				125				
Leu	Glu	Val	Lys	Ser	Cys	Leu	Lys	Asn	Lys	Thr	Lys	Glu	Ala	Ala	Glu
				130			135				140				
Leu	Pro	Met	Val	Ile	Cys	Gly	Asn	Lys	Asn	Asp	His	Gly	Glu	Leu	Cys
				145			150			155			160		
Arg	Gln	Val	Pro	Thr	Thr	Glu	Ala	Glu	Leu	Leu	Val	Ser	Gly	Asp	Glu
				165			170				175				
Asn	Cys	Ala	Tyr	Phe	Glu	Val	Ser	Ala	Lys	Lys	Asn	Thr	Asn	Val	Asp
				180			185				190				
Glu	Met	Phe	Tyr	Val	Leu	Phe	Ser	Met	Ala	Lys	Leu	Pro	His	Glu	Met
				195			200				205				
Ser	Pro	Ala	Leu	His	Arg	Lys	Ile	Ser	Val	Gln	Tyr	Gly	Asp	Ala	Phe

210	215	220
His Pro Arg Pro Phe Cys Met Arg Arg Val Lys Glu Met Asp Ala Tyr		
225	230	235 240
Gly Met Val Ser Pro Phe Ala Arg Arg Pro Ser Val Asn Ser Asp Leu		
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Lys Tyr Ile Lys Ala Lys Val Leu Arg Glu Gly Gln Ala Arg Glu Arg		
260	265	270
Asp Lys Cys Thr Ile Gln		
275		

<210> 179  
 <211> 1002  
 <212> PRT  
 <213> Homo sapiens

<400> 179		
Met Arg Gly Glu Leu Trp Leu Leu Val Leu Val Leu Arg Glu Ala Ala		
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Ser Gly Trp Ala Ala Lys Gly Thr Val Arg Gly Trp Asn Arg Arg Ala		
35	40	45
Arg Glu Ser Pro Gly His Val Ser Glu Pro Asp Arg Thr Gln Leu Ser		
50	55	60
Gln Asp Leu Gly Gly Thr Leu Ala Met Asp Thr Leu Pro Asp Asn		
65	70	75 80
Arg Thr Arg Val Val Glu Asp Asn His Ser Tyr Tyr Val Ser Arg Leu		
85	90	95
Tyr Gly Pro Ser Glu Pro His Ser Arg Glu Leu Trp Val Asp Val Ala		
100	105	110
Glu Ala Asn Arg Ser Gln Val Lys Ile His Thr Ile Leu Ser Asn Thr		
115	120	125
His Arg Gln Ala Ser Arg Val Val Leu Ser Phe Asp Phe Pro Phe Tyr		
130	135	140
Gly His Pro Leu Arg Gln Ile Thr Ile Ala Thr Gly Gly Phe Ile Phe		
145	150	155 160
Met Gly Asp Val Ile His Arg Met Leu Thr Ala Thr Gln Tyr Val Ala		
165	170	175
Pro Leu Met Ala Asn Phe Asn Pro Gly Tyr Ser Asp Asn Ser Thr Val		
180	185	190
Val Tyr Phe Asp Asn Gly Thr Val Phe Val Val Gln Trp Asp His Val		
195	200	205
Tyr Leu Gln Gly Trp Glu Asp Lys Gly Ser Phe Thr Phe Gln Ala Ala		
210	215	220
Leu His His Asp Gly Arg Ile Val Phe Ala Tyr Lys Glu Ile Pro Met		
225	230	235 240
Ser Val Pro Glu Ile Ser Ser Gln His Pro Val Lys Thr Gly Leu		
245	250	255
Ser Asp Ala Phe Met Ile Leu Asn Pro Ser Pro Asp Val Pro Glu Ser		
260	265	270
Arg Arg Arg Ser Ile Phe Glu Tyr His Arg Ile Glu Leu Asp Pro Ser		
275	280	285
Lys Val Thr Ser Met Ser Ala Val Glu Phe Thr Pro Leu Pro Thr Cys		
290	295	300
Leu Gln His Arg Ser Cys Asp Ala Cys Met Ser Ser Asp Leu Thr Phe		
305	310	315 320
Asn Cys Ser Trp Cys His Val Leu Gln Arg Cys Ser Ser Gly Phe Asp		
325	330	335
Arg Tyr Arg Gln Glu Trp Asp Gly Thr Met Gly Cys Ala Gln Glu Ala		
340	345	350
Glu Gly Gln Asp Val Arg Gly Leu Pro Gly Met Arg Thr Thr Ser		

355	360	365
Ala Ser Pro Asp Thr Ser Phe Ser Pro Tyr Asp Gly Asp Leu Thr Thr		
370	375	380
Thr Ser Ser Ser Leu Phe Ile Asp Ser Leu Thr Thr Glu Asp Asp Thr		
385	390	395
Lys Leu Asn Pro Tyr Ala Gly Gly Asp Gly Leu Gln Asn Asn Leu Ser		400
405	410	415
Pro Lys Thr Lys Gly Thr Pro Val His Leu Gly Thr Ile Val Gly Ile		
420	425	430
Val Leu Ala Val Leu Leu Val Ala Ala Ile Ile Leu Ala Gly Ile Tyr		
435	440	445
Ile Asn Gly His Pro Thr Ser Asn Ala Ala Leu Phe Phe Ile Glu Arg		
450	455	460
Arg Pro His His Trp Pro Ala Met Lys Phe Arg Ser His Pro Asp His		
465	470	475
Ser Thr Tyr Ala Glu Val Glu Pro Ser Gly His Glu Lys Glu Gly Phe		
485	490	495
Met Glu Ala Glu Gln Cys Met Arg Gly Glu Leu Trp Leu Leu Val Leu		
500	505	510
Val Leu Arg Glu Ala Ala Arg Ala Leu Ser Pro Gln Pro Gly Ala Gly		
515	520	525
His Asp Glu Gly Pro Gly Ser Gly Trp Ala Ala Lys Gly Thr Val Arg		
530	535	540
Gly Trp Asn Arg Arg Ala Arg Glu Ser Pro Gly His Val Ser Glu Pro		
545	550	555
Asp Arg Thr Gln Leu Ser Gln Asp Leu Gly Gly Gly Thr Leu Ala Met		
565	570	575
Asp Thr Leu Pro Asp Asn Arg Thr Arg Val Val Glu Asp Asn His Ser		
580	585	590
Tyr Tyr Val Ser Arg Leu Tyr Gly Pro Ser Glu Pro His Ser Arg Glu		
595	600	605
Leu Trp Val Asp Val Ala Glu Ala Asn Arg Ser Gln Val Lys Ile His		
610	615	620
Thr Ile Leu Ser Asn Thr His Arg Gln Ala Ser Arg Val Val Leu Ser		
625	630	635
Phe Asp Phe Pro Phe Tyr Gly His Pro Leu Arg Gln Ile Thr Ile Ala		
645	650	655
Thr Gly Gly Phe Ile Phe Met Gly Asp Val Ile His Arg Met Leu Thr		
660	665	670
Ala Thr Gln Tyr Val Ala Pro Leu Met Ala Asn Phe Asn Pro Gly Tyr		
675	680	685
Ser Asp Asn Ser Thr Val Val Tyr Phe Asp Asn Gly Thr Val Phe Val		
690	695	700
Val Gln Trp Asp His Val Tyr Leu Gln Gly Trp Glu Asp Lys Gly Ser		
705	710	715
Phe Thr Phe Gln Ala Ala Leu His His Asp Gly Arg Ile Val Phe Ala		
725	730	735
Tyr Lys Glu Ile Pro Met Ser Val Pro Glu Ile Ser Ser Ser Gln His		
740	745	750
Pro Val Lys Thr Gly Leu Ser Asp Ala Phe Met Ile Leu Asn Pro Ser		
755	760	765
Pro Asp Val Pro Glu Ser Arg Arg Arg Ser Ile Phe Glu Tyr His Arg		
770	775	780
Ile Glu Leu Asp Pro Ser Lys Val Thr Ser Met Ser Ala Val Glu Phe		
785	790	795
Thr Pro Leu Pro Thr Cys Leu Gln His Arg Ser Cys Asp Ala Cys Met		800
805	810	815
Ser Ser Asp Leu Thr Phe Asn Cys Ser Trp Cys His Val Leu Gln Arg		
820	825	830
Cys Ser Ser Gly Phe Asp Arg Tyr Arg Gln Glu Trp Met Asp Tyr Gly		
835	840	845

Cys Ala Gln Glu Ala Glu Gly Arg Met Cys Glu Asp Phe Gln Asp Glu  
 850 855 860  
 Asp His Asp Ser Ala Ser Pro Asp Thr Ser Phe Ser Pro Tyr Asp Gly  
 865 870 875 880  
 Asp Leu Thr Thr Ser Ser Ser Leu Phe Ile Asp Ser Leu Thr Thr  
 885 890 895  
 Glu Asp Asp Thr Lys Leu Asn Pro Tyr Ala Gly Gly Asp Gly Leu Gln  
 900 905 910  
 Asn Asn Leu Ser Pro Lys Thr Lys Gly Thr Pro Val His Leu Gly Thr  
 915 920 925  
 Ile Val Gly Ile Val Leu Ala Val Leu Leu Val Ala Ala Ile Ile Leu  
 930 935 940  
 Ala Gly Ile Tyr Ile Asn Gly His Pro Thr Ser Asn Ala Ala Leu Phe  
 945 950 955 960  
 Phe Ile Glu Arg Arg Pro His His Trp Pro Ala Met Lys Phe Arg Ser  
 965 970 975  
 His Pro Asp His Ser Thr Tyr Ala Glu Val Glu Pro Ser Gly His Glu  
 980 985 990  
 Lys Glu Gly Phe Met Glu Ala Glu Gln Cys  
 995 1000

<210> 180  
 <211> 5680  
 <212> DNA  
 <213> Homo sapiens

<400> 180

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catgctgtgt	aaagtgggtt	gaattcgttt	gcaagctatg	caaagcctga	tcttactcac	4920
caggaggatg	gaaagggttt	tttagttat	ctgagctcag	ctgagttatc	acgcttggag	4980
aaccgattta	aaggaatttag	aatatgattt	ctgaatacac	ataacattaa	actcttctct	5040
ttttctatgg	taatttagtt	atggacgttc	agcgtctctg	agttattgtt	ataaaaagact	5100
tgtcatcacc	gcactgtgct	gtaggagact	gggctgaacc	tgtacaatgg	tataccctgg	5160
aagttgcattt	ttaaaaaaaaa	aataataata	aacacctaata	atcaaaaaaaaaa	aaaaaaaaaaaa	5220

<210> 187  
 <211> 564  
 <212> PRT  
 <213> Homo sapiens

<400> 187  
 Met Ala Thr Ala Glu Arg Arg Ala Leu Gly Ile Gly Phe Gln Trp Leu  
 1 5 10 15  
 Ser Leu Ala Thr Leu Val Leu Ile Cys Ala Gly Gln Gly Gly Arg Arg  
 20 25 30  
 Glu Asp Gly Gly Pro Ala Cys Tyr Gly Gly Phe Asp Leu Tyr Phe Ile  
 35 40 45  
 Leu Asp Lys Ser Gly Ser Val Leu His His Trp Asn Glu Ile Tyr Tyr  
 50 55 60  
 Phe Val Glu Gln Leu Ala His Lys Phe Ile Ser Pro Gln Leu Arg Met  
 65 70 75 80  
 Ser Phe Ile Val Phe Ser Thr Arg Gly Thr Thr Leu Met Lys Leu Thr  
 85 90 95  
 Glu Asp Arg Glu Gln Ile Arg Gln Gly Leu Glu Glu Leu Gln Lys Val  
 100 105 110  
 Leu Pro Gly Asp Thr Tyr Met His Glu Gly Phe Glu Arg Ala Ser  
 115 120 125  
 Glu Gln Ile Tyr Tyr Glu Asn Arg Gln Gly Tyr Arg Thr Ala Ser Val  
 130 135 140  
 Ile Ile Ala Leu Thr Asp Gly Glu Leu His Glu Asp Leu Phe Phe Tyr  
 145 150 155 160  
 Ser Glu Arg Glu Ala Asn Arg Ser Arg Asp Leu Gly Ala Ile Val Tyr  
 165 170 175  
 Cys Val Gly Val Lys Asp Phe Asn Glu Thr Gln Leu Ala Arg Ile Ala  
 180 185 190  
 Asp Ser Lys Asp His Val Phe Pro Val Asn Asp Gly Phe Gln Ala Leu  
 195 200 205  
 Gln Gly Ile Ile His Ser Ile Leu Lys Lys Ser Cys Ile Glu Ile Leu  
 210 215 220  
 Ala Ala Glu Pro Ser Thr Ile Cys Ala Gly Glu Ser Phe Gln Val Val  
 225 230 235 240

Val Arg Gly Asn Gly Phe Arg His Ala Arg Asn Val Asp Arg Val Leu  
                   245                  250                  255  
 Cys Ser Phe Lys Ile Asn Asp Ser Val Thr Leu Asn Glu Lys Pro Phe  
                   260                  265                  270  
 Ser Val Glu Asp Thr Tyr Leu Leu Cys Pro Ala Pro Ile Leu Lys Glu  
                   275                  280                  285  
 Val Gly Met Lys Ala Ala Leu Gln Val Ser Met Asn Asp Gly Leu Ser  
                   290                  295                  300  
 Phe Ile Ser Ser Ser Val Ile Ile Thr Thr His Cys Ser Asp Gly  
                   305                  310                  315                  320  
 Ser Ile Leu Ala Ile Ala Leu Leu Ile Leu Phe Leu Leu Leu Ala Leu  
                   325                  330                  335  
 Ala Leu Leu Trp Trp Phe Trp Pro Leu Cys Cys Thr Val Ile Ile Lys  
                   340                  345                  350  
 Glu Val Pro Pro Pro Pro Ala Glu Glu Ser Glu Glu Glu Asp Asp Asp  
                   355                  360                  365  
 Gly Leu Pro Lys Lys Lys Trp Pro Thr Val Asp Ala Ser Tyr Tyr Gly  
                   370                  375                  380  
 Gly Arg Gly Val Gly Gly Ile Lys Arg Met Glu Val Arg Trp Gly Glu  
                   385                  390                  395                  400  
 Lys Gly Ser Thr Glu Glu Gly Ala Lys Leu Glu Lys Ala Lys Asn Ala  
                   405                  410                  415  
 Arg Val Lys Met Pro Glu Gln Glu Tyr Glu Phe Pro Glu Pro Arg Asn  
                   420                  425                  430  
 Leu Asn Asn Asn Met Arg Arg Pro Ser Ser Pro Arg Lys Trp Tyr Ser  
                   435                  440                  445  
 Pro Ile Lys Gly Lys Leu Asp Ala Leu Trp Val Leu Leu Arg Lys Gly  
                   450                  455                  460  
 Tyr Asp Arg Val Ser Val Met Arg Pro Gln Pro Gly Asp Thr Gly Arg  
                   465                  470                  475                  480  
 Cys Ile Asn Phe Thr Arg Val Lys Asn Asn Gln Pro Ala Lys Tyr Pro  
                   485                  490                  495  
 Leu Asn Asn Ala Tyr His Thr Ser Ser Pro Pro Pro Ala Pro Ile Tyr  
                   500                  505                  510  
 Thr Pro Pro Pro Ala Pro His Cys Pro Pro Pro Pro Pro Ser Ala  
                   515                  520                  525  
 Pro Thr Pro Pro Ile Pro Ser Pro Pro Ser Thr Leu Pro Pro Pro Pro  
                   530                  535                  540  
 Gln Ala Pro Pro Pro Asn Arg Ala Pro Pro Pro Ser Arg Pro Pro Pro  
                   545                  550                  555                  560  
 Arg Pro Ser Val

<210> 188  
 <211> 1331  
 <212> PRT  
 <213> Homo sapiens

<400> 188  
 Met Arg Gly Ala Pro Ala Arg Leu Leu Leu Pro Leu Leu Pro Trp Leu  
     1              5                  10                  15  
 Leu Leu Leu Leu Ala Pro Glu Ala Arg Gly Ala Pro Gly Cys Pro Leu  
     20                  25                  30  
 Ser Ile Arg Ser Cys Lys Cys Ser Gly Glu Arg Pro Lys Gly Leu Ser  
     35                  40                  45  
 Gly Gly Val Pro Gly Pro Ala Arg Arg Arg Val Val Cys Ser Gly Gly  
     50                  55                  60  
 Asp Leu Pro Glu Pro Pro Glu Pro Gly Leu Leu Pro Asn Gly Thr Val  
     65                  70                  75                  80  
 Thr Leu Leu Leu Ser Asn Asn Lys Ile Thr Gly Leu Arg Asn Gly Ser  
     85                  90                  95

Phe Leu Gly Leu Ser Leu Leu Glu Lys Leu Asp Leu Arg Asn Asn Ile  
     100                         105                         110  
 Ile Ser Thr Val Gln Pro Gly Ala Phe Leu Gly Leu Gly Glu Leu Lys  
     115                         120                         125  
 Arg Leu Asp Leu Ser Asn Asn Arg Ile Gly Cys Leu Thr Ser Glu Thr  
     130                         135                         140  
 Phe Gln Gly Leu Pro Arg Leu Leu Arg Leu Asn Ile Ser Gly Asn Ile  
     145                         150                         155                         160  
 Phe Ser Ser Leu Gln Pro Gly Val Phe Asp Glu Leu Pro Ala Leu Lys  
     165                         170                         175  
 Val Val Asp Leu Gly Thr Glu Phe Leu Thr Cys Asp Cys His Leu Arg  
     180                         185                         190  
 Trp Leu Leu Pro Trp Ala Gln Asn Arg Ser Leu Gln Leu Ser Glu His  
     195                         200                         205  
 Thr Leu Cys Ala Tyr Pro Ser Ala Leu His Ala Gln Ala Leu Gly Ser  
     210                         215                         220  
 Leu Gln Glu Ala Gln Leu Cys Cys Glu Gly Ala Leu Glu Leu His Thr  
     225                         230                         235                         240  
 His His Leu Ile Pro Ser Leu Arg Gln Val Val Phe Gln Gly Asp Arg  
     245                         250                         255  
 Leu Pro Phe Gln Cys Ser Ala Ser Tyr Leu Gly Asn Asp Thr Arg Ile  
     260                         265                         270  
 Arg Trp Tyr His Asn Arg Ala Pro Val Glu Gly Asp Glu Gln Ala Gly  
     275                         280                         285  
 Ile Leu Leu Ala Glu Ser Leu Ile His Asp Cys Thr Phe Ile Thr Ser  
     290                         295                         300  
 Glu Leu Thr Leu Ser His Ile Gly Val Trp Ala Ser Gly Glu Trp Glu  
     305                         310                         315                         320  
 Cys Thr Val Ser Met Ala Gln Gly Asn Ala Ser Lys Lys Val Glu Ile  
     325                         330                         335  
 Val Val Leu Glu Thr Ser Ala Ser Tyr Cys Pro Ala Glu Arg Val Ala  
     340                         345                         350  
 Asn Asn Arg Gly Asp Phe Arg Trp Pro Arg Thr Leu Ala Gly Ile Thr  
     355                         360                         365  
 Ala Tyr Gln Ser Cys Leu Gln Tyr Pro Phe Thr Ser Val Pro Leu Gly  
     370                         375                         380  
 Gly Gly Ala Pro Gly Thr Arg Ala Ser Arg Arg Cys Asp Arg Ala Gly  
     385                         390                         395                         400  
 Arg Trp Glu Pro Gly Asp Tyr Ser His Cys Leu Tyr Thr Asn Asp Ile  
     405                         410                         415  
 Thr Arg Val Leu Tyr Thr Phe Val Leu Met Pro Ile Asn Ala Ser Asn  
     420                         425                         430  
 Ala Leu Thr Leu Ala His Gln Leu Arg Val Tyr Thr Ala Glu Ala Ala  
     435                         440                         445  
 Ser Phe Ser Asp Met Met Asp Val Val Tyr Val Ala Gln Met Ile Gln  
     450                         455                         460  
 Lys Phe Leu Gly Tyr Val Asp Gln Ile Lys Glu Leu Val Glu Val Met  
     465                         470                         475                         480  
 Val Asp Met Ala Ser Asn Leu Met Leu Val Asp Glu His Leu Leu Trp  
     485                         490                         495  
 Leu Ala Gln Arg Glu Asp Lys Ala Cys Ser Arg Ile Val Gly Ala Leu  
     500                         505                         510  
 Glu Arg Ile Gly Gly Ala Ala Leu Ser Pro His Ala Gln His Ile Ser  
     515                         520                         525  
 Val Asn Ala Arg Asn Val Ala Leu Glu Ala Tyr Leu Ile Lys Pro His  
     530                         535                         540  
 Ser Tyr Val Gly Leu Thr Cys Thr Ala Phe Gln Arg Arg Glu Gly Gly  
     545                         550                         555                         560  
 Val Pro Gly Thr Arg Pro Gly Ser Pro Gly Gln Asn Pro Pro Pro Glu  
     565                         570                         575  
 Pro Glu Pro Pro Ala Asp Gln Gln Leu Arg Phe Arg Cys Thr Thr Gly

580	585	590
Arg Pro Asn Val Ser Leu Ser	Phe His Ile Lys Asn Ser Val Ala	
595	600	605
Leu Ala Ser Ile Gln Leu Pro	Pro Ser Leu Phe Ser Ser Leu Pro Ala	
610	615	620
Ala Leu Ala Pro Pro Val	Pro Pro Asp Cys Thr Leu Gln Leu Leu Val	
625	630	635
Phe Arg Asn Gly Arg Leu Phe His Ser His Ser Asn Thr Ser Arg Pro		
645	650	655
Gly Ala Ala Gly Pro Gly Lys Arg Arg Gly Val Ala Thr Pro Val Ile		
660	665	670
Phe Ala Gly Thr Ser Gly Cys Gly Val Gly Asn Leu Thr Glu Pro Val		
675	680	685
Ala Val Ser Leu Arg His Trp Ala Glu Gly Ala Glu Pro Val Ala Ala		
690	695	700
Trp Trp Ser Gln Glu Gly Pro Gly Glu Ala Gly Trp Thr Ser Glu		
705	710	715
Gly Cys Gln Leu Arg Ser Ser Gln Pro Asn Val Ser Ala Leu His Cys		
725	730	735
Gln His Leu Gly Asn Val Ala Val Leu Met Glu Leu Ser Ala Phe Pro		
740	745	750
Arg Glu Val Gly Gly Ala Gly Ala Gly Leu His Pro Val Val Tyr Pro		
755	760	765
Cys Thr Ala Leu Leu Leu Cys Leu Phe Ala Thr Ile Ile Thr Tyr		
770	775	780
Ile Leu Asn His Ser Ser Ile Arg Val Ser Arg Lys Gly Trp His Met		
785	790	795
Leu Leu Asn Leu Cys Phe His Ile Ala Met Thr Ser Ala Val Phe Ala		
805	810	815
Gly Gly Ile Thr Leu Thr Asn Tyr Gln Met Val Cys Gln Ala Val Gly		
820	825	830
Ile Thr Leu His Tyr Ser Ser Leu Ser Thr Leu Leu Trp Met Gly Val		
835	840	845
Lys Ala Arg Val Leu His Lys Glu Leu Thr Trp Arg Ala Pro Pro Pro		
850	855	860
Gln Glu Gly Asp Pro Ala Leu Pro Thr Pro Ser Pro Met Leu Arg Phe		
865	870	875
Tyr Leu Ile Ala Gly Ile Pro Leu Ile Ile Cys Gly Ile Thr Ala		
885	890	895
Ala Val Asn Ile His Asn Tyr Arg Asp His Ser Pro Tyr Cys Trp Leu		
900	905	910
Val Trp Arg Pro Ser Leu Gly Ala Phe Tyr Ile Pro Val Ala Leu Ile		
915	920	925
Leu Leu Ile Thr Trp Ile Tyr Phe Leu Cys Ala Gly Leu Arg Leu Arg		
930	935	940
Gly Pro Leu Ala Gln Asn Pro Lys Ala Gly Asn Ser Arg Ala Ser Leu		
945	950	955
Glu Ala Gly Glu Glu Leu Arg Gly Ser Thr Arg Leu Arg Gly Ser Gly		
965	970	975
Pro Leu Leu Ser Asp Ser Gly Ser Leu Leu Ala Thr Gly Ser Ala Arg		
980	985	990
Val Gly Thr Pro Gly Pro Pro Glu Asp Gly Asp Ser Leu Tyr Ser Pro		
995	1000	1005
Gly Val Gln Leu Gly Ala Leu Val Thr Thr His Phe Leu Tyr Leu Ala		
1010	1015	1020
Met Trp Ala Cys Gly Ala Leu Ala Val Ser Gln Arg Trp Leu Pro Arg		
1025	1030	1035
Val Val Cys Ser Cys Leu Tyr Gly Val Ala Ala Ser Ala Leu Gly Leu		
1045	1050	1055
Phe Val Phe Thr His His Cys Ala Arg Arg Arg Asp Val Arg Ala Ser		
1060	1065	1070

Trp Arg Ala Cys Cys Pro Pro Ala Ser Pro Ala Ala Pro His Ala Pro  
 1075 1080 1085  
 Pro Arg Ala Leu Pro Ala Ala Ala Glu Asp Gly Ser Pro Val Phe Gly  
 1090 1095 1100  
 Glu Gly Pro Pro Ser Leu Lys Ser Ser Pro Ser Gly Ser Ser Gly His  
 1105 1110 1115 1120  
 Pro Leu Ala Leu Gly Pro Cys Lys Leu Thr Asn Leu Gln Leu Ala Gln  
 1125 1130 1135  
 Ser Gln Val Cys Glu Ala Gly Ala Ala Gly Gly Glu Gly Glu Pro  
 1140 1145 1150  
 Glu Pro Ala Gly Thr Arg Gly Asn Leu Ala His Arg His Pro Asn Asn  
 1155 1160 1165  
 Val His His Gly Arg Arg Ala His Lys Ser Arg Ala Lys Gly His Arg  
 1170 1175 1180  
 Ala Gly Glu Ala Cys Gly Lys Asn Arg Leu Lys Ala Leu Arg Gly Gly  
 1185 1190 1195 1200  
 Ala Ala Gly Ala Leu Glu Leu Leu Ser Ser Glu Ser Gly Ser Leu His  
 1205 1210 1215  
 Asn Ser Pro Thr Asp Ser Tyr Leu Gly Ser Ser Arg Asn Ser Pro Gly  
 1220 1225 1230  
 Ala Gly Leu Gln Leu Glu Gly Glu Pro Met Leu Thr Pro Ser Glu Gly  
 1235 1240 1245  
 Ser Asp Thr Ser Ala Ala Pro Leu Ser Glu Ala Gly Arg Ala Gly Gln  
 1250 1255 1260  
 Arg Arg Ser Ala Ser Arg Asp Ser Leu Lys Gly Gly Gly Ala Leu Glu  
 1265 1270 1275 1280  
 Lys Glu Ser His Arg Arg Ser Tyr Pro Leu Asn Ala Ala Ser Leu Asn  
 1285 1290 1295  
 Gly Ala Pro Lys Gly Lys Tyr Asp Asp Val Thr Leu Met Gly Ala  
 1300 1305 1310  
 Glu Val Ala Ser Gly Gly Cys Met Lys Thr Gly Leu Trp Lys Ser Glu  
 1315 1320 1325  
 Thr Thr Val  
 1330

<210> 189  
 <211> 529  
 <212> PRT  
 <213> Homo sapiens

<400> 189  
 Met Ala Arg Phe Pro Lys Ala Asp Leu Ala Ala Gly Val Met Leu  
 1 5 10 15  
 Leu Cys His Phe Phe Thr Asp Gln Phe Gln Phe Ala Asp Gly Lys Pro  
 20 25 30  
 Gly Asp Gln Ile Leu Asp Trp Gln Tyr Gly Val Thr Gln Ala Phe Pro  
 35 40 45  
 His Thr Glu Glu Val Glu Val Asp Ser His Ala Tyr Ser His Arg  
 50 55 60  
 Trp Lys Arg Asn Leu Asp Phe Leu Lys Ala Val Asp Thr Asn Arg Ala  
 65 70 75 80  
 Ser Val Gly Gln Asp Ser Pro Glu Pro Arg Ser Phe Thr Asp Leu Leu  
 85 90 95  
 Leu Asp Asp Gly Gln Asp Asn Asn Thr Gln Ile Glu Glu Asp Thr Asp  
 100 105 110  
 His Asn Tyr Tyr Ile Ser Arg Ile Tyr Gly Pro Ser Asp Ser Ala Ser  
 115 120 125  
 Arg Asp Leu Trp Val Asn Ile Asp Gln Met Glu Lys Asp Lys Val Lys  
 130 135 140  
 Ile His Gly Ile Leu Ser Asn Thr His Arg Gln Ala Ala Arg Val Asn  
 145 150 155 160

Leu Ser Phe Asp Phe Pro Phe Tyr Gly His Phe Leu Arg Glu Ile Thr  
 165 170 175  
 Val Ala Thr Gly Gly Phe Ile Tyr Thr Gly Glu Val Val His Arg Met  
 180 185 190  
 Leu Thr Ala Thr Gln Tyr Ile Ala Pro Leu Met Ala Asn Phe Asp Pro  
 195 200 205  
 Ser Val Ser Arg Asn Ser Thr Val Arg Tyr Phe Asp Asn Gly Thr Ala  
 210 215 220  
 Leu Val Val Gln Trp Asp His Val His Leu Gln Asp Asn Tyr Asn Leu  
 225 230 235 240  
 Gly Ser Phe Thr Phe Gln Ala Thr Leu Leu Met Asp Gly Arg Ile Ile  
 245 250 255  
 Phe Gly Tyr Lys Glu Ile Pro Val Leu Val Thr Gln Ile Ser Ser Thr  
 260 265 270  
 Asn His Pro Val Lys Val Gly Leu Ser Asp Ala Phe Val Val Val His  
 275 280 285  
 Arg Ile Gln Gln Ile Pro Asn Val Arg Arg Arg Thr Ile Tyr Glu Tyr  
 290 295 300  
 His Arg Val Glu Leu Gln Met Ser Lys Ile Thr Asn Ile Ser Ala Val  
 305 310 315 320  
 Glu Met Thr Pro Leu Pro Thr Cys Leu Gln Phe Asn Arg Cys Gly Pro  
 325 330 335  
 Cys Val Ser Ser Gln Ile Gly Phe Asn Cys Ser Trp Cys Ser Lys Leu  
 340 345 350  
 Gln Arg Cys Ser Ser Gly Phe Asp Arg His Arg Gln Asp Trp Val Asp  
 355 360 365  
 Ser Gly Cys Pro Glu Glu Ser Lys Glu Lys Met Cys Glu Asn Thr Glu  
 370 375 380  
 Pro Val Glu Thr Ser Ser Arg Thr Thr Thr Thr Ile Gly Ala Thr Thr  
 385 390 395 400  
 Thr Gln Phe Arg Val Leu Thr Thr Thr Arg Arg Ala Val Thr Ser Gln  
 405 410 415  
 Phe Pro Thr Ser Leu Pro Thr Glu Asp Asp Thr Lys Ile Ala Leu His  
 420 425 430  
 Leu Lys Asp Asn Gly Ala Ser Thr Asp Asp Ser Ala Ala Glu Lys Lys  
 435 440 445  
 Gly Gly Thr Leu His Ala Gly Leu Ile Val Gly Ile Leu Ile Leu Val  
 450 455 460  
 Leu Ile Val Ala Thr Ala Ile Leu Val Thr Val Tyr Met Tyr His His  
 465 470 475 480  
 Pro Thr Ser Ala Ala Ser Ile Phe Phe Ile Glu Arg Arg Pro Ser Arg  
 485 490 495  
 Trp Pro Ala Met Lys Phe Arg Arg Gly Ser Gly His Pro Ala Tyr Ala  
 500 505 510  
 Glu Val Glu Pro Val Gly Glu Lys Glu Gly Phe Ile Val Ser Glu Gln  
 515 520 525  
 Cys

<210> 190  
 <211> 765  
 <212> PRT  
 <213> Mus musculus

<400> 190  
 Met Leu Leu Arg Leu Leu Ala Trp Val Ala Ala Val Pro Ala Leu  
 1 5 10 15  
 Gly Gln Val Pro Trp Thr Pro Glu Pro Arg Ala Ala Cys Gly Pro Ser  
 20 25 30  
 Ser Cys Tyr Ala Leu Phe Pro Arg Arg Arg Thr Phe Leu Glu Ala Trp  
 35 40 45

Arg Ala Cys Arg Glu Leu Gly Gly Asn Leu Ala Thr Pro Arg Thr Pro  
 50 55 60  
 Glu Glu Ala Gln Arg Val Asp Ser Leu Val Gly Val Gly Pro Ala Asn  
 65 70 75 80  
 Gly Leu Leu Trp Ile Gly Leu Gln Arg Gln Ala Arg Gln Cys Gln Pro  
 85 90 95  
 Gln Arg Pro Leu Arg Gly Phe Ile Trp Thr Thr Gly Asp Gln Asp Thr  
 100 105 110  
 Ala Phe Thr Asn Trp Ala Gln Pro Ala Thr Glu Gly Pro Cys Pro Ala  
 115 120 125  
 Gln Arg Cys Ala Ala Leu Glu Ala Ser Gly Glu His Arg Trp Leu Glu  
 130 135 140  
 Gly Ser Cys Thr Leu Ala Val Asp Gly Tyr Leu Cys Gln Phe Gly Phe  
 145 150 155 160  
 Glu Gly Ala Cys Pro Ala Leu Pro Leu Glu Val Gly Gln Ala Gly Pro  
 165 170 175  
 Ala Val Tyr Thr Pro Phe Asn Leu Val Ser Ser Glu Phe Glu Trp  
 180 185 190  
 Leu Pro Phe Gly Ser Val Ala Ala Val Gln Cys Gln Ala Gly Arg Gly  
 195 200 205  
 Ala Ser Leu Leu Cys Val Lys Gln Pro Ser Gly Gly Val Gly Trp Ser  
 210 215 220  
 Gln Thr Gly Pro Leu Cys Pro Gly Thr Gly Cys Gly Pro Asp Asn Gly  
 225 230 235 240  
 Gly Cys Glu His Glu Cys Val Glu Glu Val Asp Gly Ala Val Ser Cys  
 245 250 255  
 Arg Cys Ser Glu Gly Phe Arg Leu Ala Ala Asp Gly His Ser Cys Glu  
 260 265 270  
 Asp Pro Cys Ala Gln Ala Pro Cys Glu Gln Gln Cys Glu Pro Gly Gly  
 275 280 285  
 Pro Gln Gly Tyr Ser Cys His Cys Arg Leu Gly Phe Arg Pro Ala Glu  
 290 295 300  
 Asp Asp Pro His Arg Cys Val Asp Thr Asp Glu Cys Gln Ile Ala Gly  
 305 310 315 320  
 Val Cys Gln Gln Met Cys Val Asn Tyr Val Gly Gly Phe Glu Cys Tyr  
 325 330 335  
 Cys Ser Glu Gly His Glu Leu Glu Ala Asp Gly Ile Ser Cys Ser Pro  
 340 345 350  
 Ala Gly Ala Met Gly Ala Gln Ala Ser Gln Asp Leu Arg Asp Glu Leu  
 355 360 365  
 Leu Asp Asp Gly Glu Glu Gly Glu Asp Glu Glu Pro Trp Glu Asp  
 370 375 380  
 Phe Asp Gly Thr Trp Thr Glu Glu Gln Gly Ile Leu Trp Leu Ala Pro  
 385 390 395 400  
 Thr His Pro Pro Asp Phe Gly Leu Pro Tyr Arg Pro Asn Phe Pro Gln  
 405 410 415  
 Asp Gly Glu Pro Gln Arg Leu His Leu Glu Pro Thr Trp Pro Pro Pro  
 420 425 430  
 Leu Ser Ala Pro Arg Gly Pro Tyr His Ser Ser Val Val Ser Ala Thr  
 435 440 445  
 Arg Pro Met Val Ile Ser Ala Thr Arg Pro Thr Leu Pro Ser Ala His  
 450 455 460  
 Lys Thr Ser Val Ile Ser Ala Thr Arg Pro Pro Leu Ser Pro Val His  
 465 470 475 480  
 Pro Pro Ala Met Ala Pro Ala Thr Pro Pro Ala Val Phe Ser Glu His  
 485 490 495  
 Gln Ile Pro Lys Ile Lys Ala Asn Tyr Pro Asp Leu Pro Phe Gly His  
 500 505 510  
 Lys Pro Gly Ile Thr Ser Ala Thr His Pro Ala Arg Ser Pro Pro Tyr  
 515 520 525  
 Gln Pro Pro Ile Ile Ser Thr Asn Tyr Pro Gln Val Phe Pro Pro His

530	535	540
Gln Ala Pro Met Ser Pro Asp Thr His Thr Ile Thr Tyr Leu Pro Pro		
545	550	555
Val Pro Pro His Leu Asp Pro Gly Asp Thr Thr Ser Lys Ala His Gln		560
565	570	575
His Pro Leu Leu Pro Asp Ala Pro Gly Ile Arg Thr Gln Ala Pro Gln		
580	585	590
Leu Ser Val Ser Ala Leu Gln Pro Pro Leu Pro Thr Asn Ser Arg Ser		
595	600	605
Ser Val His Glu Thr Pro Val Pro Ala Ala Asn Gln Pro Pro Ala Phe		
610	615	620
Pro Ser Ser Pro Leu Pro Pro Gln Arg Pro Thr Asn Gln Thr Ser Ser		
625	630	635
Ile Ser Pro Thr His Ser Tyr Ser Arg Ala Pro Leu Val Pro Arg Glu		640
645	650	655
Gly Val Pro Ser Pro Lys Ser Val Pro Gln Leu Pro Ser Val Pro Ser		
660	665	670
Thr Ala Ala Pro Thr Ala Leu Ala Glu Ser Gly Leu Ala Gly Gln Ser		
675	680	685
Gln Arg Asp Asp Arg Trp Leu Leu Val Ala Leu Leu Val Pro Thr Cys		
690	695	700
Val Phe Leu Val Val Leu Leu Ala Leu Gly Ile Val Tyr Cys Thr Arg		
705	710	715
Cys Gly Ser His Ala Pro Asn Lys Arg Ile Thr Asp Cys Tyr Arg Trp		
725	730	735
Val Thr His Ala Gly Asn Lys Ser Ser Thr Glu Pro Met Pro Pro Arg		
740	745	750
Gly Ser Leu Thr Gly Val Gln Thr Cys Arg Thr Ser Val		
755	760	765

<210> 191  
 <211> 1329  
 <212> PRT  
 <213> Mus musculus

<400> 191			
Met Pro Val Pro Pro Ala Arg Leu Leu Leu Pro Leu Leu Pro Cys			
1	5	10	15
Leu Leu Leu Leu Ala Pro Gly Thr Arg Gly Ala Pro Gly Cys Pro Val			
20	25	30	
Pro Ile Arg Gly Cys Lys Cys Ser Gly Glu Arg Pro Lys Gly Leu Ser			
35	40	45	
Gly Gly Ala His Asn Pro Ala Arg Arg Arg Val Val Cys Gly Gly Gly			
50	55	60	
Asp Leu Pro Glu Pro Pro Asp Pro Gly Leu Leu Pro Asn Gly Thr Ile			
65	70	75	80
Thr Leu Leu Leu Ser Asn Asn Lys Ile Thr Gly Leu Arg Asn Gly Ser			
85	90	95	
Phe Leu Gly Leu Ser Leu Leu Glu Lys Leu Asp Leu Arg Ser Asn Val			
100	105	110	
Ile Ser Thr Val Gln Pro Gly Ala Phe Leu Gly Leu Gly Glu Leu Lys			
115	120	125	
Arg Leu Asp Leu Ser Asn Asn Arg Ile Gly Cys Leu Thr Ser Glu Thr			
130	135	140	
Phe Gln Gly Leu Pro Arg Leu Leu Arg Leu Asn Ile Ser Gly Asn Ile			
145	150	155	160
Tyr Ser Ser Leu Gln Pro Gly Val Phe Asp Glu Leu Pro Ala Leu Lys			
165	170	175	
Ile Val Asp Phe Gly Thr Glu Phe Leu Thr Cys Asp Cys Arg Leu Arg			
180	185	190	
Trp Leu Leu Pro Trp Ala Arg Asn His Ser Leu Gln Leu Ser Glu Arg			

195	200	205
Thr Leu Cys Ala Tyr Pro Ser	Ala Leu His Ala His Ala	Leu Ser Ser
210	215	220
Leu Gln Glu Ser Gln Leu Arg Cys Glu Gly Ala	Leu Glu Leu His Thr	
225	230	235
His Tyr Leu Ile Pro Ser Leu Arg Gln Val Val Phe Gln Gly Asp Arg		240
245	250	255
Leu Pro Phe Gln Cys Ser Ala Ser Tyr	Leu Gly Asn Asp Thr Arg Ile	
260	265	270
His Trp Tyr His Asn Gly Ala Pro Met Glu Ser Asp	Glu Gln Ala Gly	
275	280	285
Ile Val Leu Ala Glu Asn Leu Ile His Asp Cys	Thr Phe Ile Thr Ser	
290	295	300
Glu Leu Thr Leu Ser His Ile Gly Val Trp Ala Ser Gly Glu Trp Glu		
305	310	315
Cys Ser Val Ser Thr Val Gln Gly Asn Thr Ser Lys Lys Val Glu Ile		320
325	330	335
Val Val Leu Glu Thr Ser Ala Ser Tyr Cys Pro Ala Glu Arg Val Thr		
340	345	350
Asn Asn Arg Gly Asp Phe Arg Trp Pro Arg Thr Leu Ala Gly Ile Thr		
355	360	365
Ala Tyr Gln Ser Cys Leu Gln Tyr Pro Phe Thr Ser Val Pro Leu Ser		
370	375	380
Gly Gly Ala Pro Gly Thr Arg Ala Ser Arg Arg Cys Asp Arg Ala Gly		
385	390	395
Arg Trp Glu Pro Gly Asp Tyr Ser His Cys Leu Tyr Thr Asn Asp Ile		400
405	410	415
Thr Arg Val Leu Tyr Thr Phe Val Leu Met Pro Ile Asn Ala Ser Asn		
420	425	430
Ala Leu Thr Leu Ala His Gln Leu Arg Val Tyr Thr Ala Glu Ala Ala		
435	440	445
Ser Phe Ser Asp Met Met Asp Val Val Tyr Val Ala Gln Met Ile Gln		
450	455	460
Lys Phe Leu Gly Tyr Val Asp Gln Ile Lys Glu Leu Val Glu Val Met		
465	470	475
Val Asp Met Ala Ser Asn Leu Met Leu Val Asp Glu His Leu Leu Trp		480
485	490	495
Leu Ala Gln Arg Glu Asp Lys Ala Cys Ser Gly Ile Val Gly Ala Leu		
500	505	510
Glu Arg Ile Gly Gly Ala Ala Leu Ser Pro His Ala Gln His Ile Ser		
515	520	525
Val Asn Ser Arg Asn Val Ala Leu Glu Ala Tyr Leu Ile Lys Pro His		
530	535	540
Ser Tyr Val Gly Leu Thr Cys Thr Ala Phe Gln Arg Arg Glu Val Gly		
545	550	555
Val Ser Gly Ala Gln Pro Ser Ser Val Gly Gln Asp Ala Pro Val Glu		560
565	570	575
Pro Glu Pro Leu Ala Asp Gln Gln Leu Arg Phe Arg Cys Thr Thr Gly		
580	585	590
Arg Pro Asn Ile Ser Leu Ser Ser Phe His Ile Lys Asn Ser Val Ala		
595	600	605
Leu Ala Ser Ile Gln Leu Pro Pro Ser Leu Phe Ser Thr Leu Pro Ala		
610	615	620
Ala Leu Ala Pro Pro Val Pro Pro Asp Cys Thr Leu Gln Leu Leu Val		
625	630	635
Phe Arg Asn Gly Arg Leu Phe Arg Ser His Gly Asn Asn Thr Ser Arg		640
645	650	655
Pro Gly Ala Ala Gly Pro Gly Lys Arg Arg Gly Val Ala Thr Pro Val		
660	665	670
Ile Phe Ala Gly Thr Ser Gly Cys Gly Val Gly Asn Leu Thr Glu Pro		
675	680	685

Val Ala Val Ser Leu Arg His Trp Ala Glu Gly Ala Asp Pro Met Ala  
 690 695 700  
 Ala Trp Trp Asn Gln Asp Gly Pro Gly Gly Trp Ser Ser Glu Gly Cys  
 705 710 715 720  
 Arg Leu Arg Tyr Ser Gln Pro Asn Val Ser Ser Leu Tyr Cys Gln His  
 725 730 735  
 Leu Gly Asn Val Ala Val Leu Met Glu Leu Asn Ala Phe Pro Arg Glu  
 740 745 750  
 Ala Gly Gly Ser Gly Ala Gly Leu His Pro Val Val Tyr Pro Cys Thr  
 755 760 765  
 Ala Leu Leu Leu Cys Leu Phe Ser Thr Ile Ile Thr Tyr Ile Leu  
 770 775 780  
 Asn His Ser Ser Ile His Val Ser Arg Lys Gly Trp His Met Leu Leu  
 785 790 795 800  
 Asn Leu Cys Phe His Met Ala Met Thr Ser Ala Val Phe Val Gly Gly  
 805 810 815  
 Val Thr Leu Thr Asn Tyr Gln Met Val Cys Gln Ala Val Gly Ile Thr  
 820 825 830  
 Leu His Tyr Ser Ser Leu Ser Ser Leu Leu Trp Met Gly Val Lys Ala  
 835 840 845  
 Arg Val Leu His Lys Glu Leu Ser Trp Arg Ala Pro Pro Leu Glu Glu  
 850 855 860  
 Gly Glu Ala Ala Pro Pro Gly Pro Arg Pro Met Leu Arg Phe Tyr Leu  
 865 870 875 880  
 Ile Ala Gly Gly Ile Pro Leu Ile Ile Cys Gly Ile Thr Ala Ala Val  
 885 890 895  
 Asn Ile His Asn Tyr Arg Asp His Ser Pro Tyr Cys Trp Leu Val Trp  
 900 905 910  
 Arg Pro Ser Leu Gly Ala Phe Tyr Ile Pro Val Ala Leu Ile Leu Pro  
 915 920 925  
 Ile Thr Trp Ile Tyr Phe Leu Cys Ala Gly Leu His Leu Arg Ser His  
 930 935 940  
 Val Ala Gln Asn Pro Lys Gln Gly Asn Arg Ile Ser Leu Glu Pro Gly  
 945 950 955 960  
 Glu Glu Leu Arg Gly Ser Thr Arg Leu Arg Ser Ser Gly Val Leu Leu  
 965 970 975  
 Asn Asp Ser Gly Ser Leu Leu Ala Thr Val Ser Ala Gly Val Gly Thr  
 980 985 990  
 Pro Ala Pro Pro Glu Asp Gly Asp Gly Val Tyr Ser Pro Gly Val Gln  
 995 1000 1005  
 Leu Gly Ala Leu Met Thr Thr His Phe Leu Tyr Leu Ala Met Trp Ala  
 1010 1015 1020  
 Cys Gly Ala Leu Ala Val Ser Gln Arg Trp Leu Pro Arg Val Val Cys  
 1025 1030 1035 1040  
 Ser Cys Leu Tyr Gly Val Ala Ala Ser Ala Leu Gly Leu Phe Val Phe  
 1045 1050 1055  
 Thr His His Cys Ala Arg Arg Arg Asp Val Arg Ala Ser Trp Arg Ala  
 1060 1065 1070  
 Cys Cys Pro Pro Ala Ser Pro Ser Ala Ser His Val Pro Ala Arg Ala  
 1075 1080 1085  
 Leu Pro Thr Ala Thr Glu Asp Gly Ser Pro Val Leu Gly Glu Gly Pro  
 1090 1095 1100  
 Ala Ser Leu Lys Ser Ser Pro Ser Gly Ser Ser Gly Arg Ala Pro Pro  
 1105 1110 1115 1120  
 Pro Pro Cys Lys Leu Thr Asn Leu Gln Val Ala Gln Ser Gln Val Cys  
 1125 1130 1135  
 Glu Ala Ser Val Ala Ala Arg Gly Asp Gly Glu Pro Glu Pro Thr Gly  
 1140 1145 1150  
 Ser Arg Gly Ser Leu Ala Pro Arg His His Asn Asn Leu His His Gly  
 1155 1160 1165  
 Arg Arg Val His Lys Ser Arg Ala Lys Gly His Arg Ala Gly Glu Thr

1170	1175	1180
Gly	Gly	Lys
Ser	Arg	Leu
1185	1190	1195
Ala	Pro	Glu
Leu	Leu	Leu
Ser	Ser	Glu
1205	1210	1215
Ser	Asp	Tyr
Asp	Ser	Pro
Tyr	Pro	Gly
1220	1225	1230
Pro	Leu	Glu
Glu	Glu	Pro
1235	1240	1245
Met	Leu	Thr
Leu	Thr	Pro
1250	1255	1260
Ser	Ala	Ala
Ala	Pro	Ile
Ile	Ala	Glu
1265	1270	1275
Ser	Arg	Arg
Arg	Ser	Tyr
Tyr	Pro	Leu
1285	1290	1295
Pro	Lys	Gly
Gly	Lys	Tyr
1300	1305	1310
Ile	Ala	Gly
Gly	Ser	Met
1315	1320	1325
Val		

<210> 192  
 <211> 500  
 <212> PRT  
 <213> Mus musculus

<400> 192		
Met	Arg	Ala
Gln	Leu	Trp
Leu	Leu	Gln
Leu	Leu	Leu
Leu	Leu	Leu
Leu	Leu	Arg
1	5	10
Ala	Arg	Ala
Leu	Ser	Pro
Ala	Thr	Pro
Asp	Ser	Ala
Trp	Thr	Ala
Lys	Arg	Thr
Arg	Gln	Gly
Gly	Trp	Ser
15	20	25
Arg	Arg	Arg
Arg	Ser	Pro
Ala	Gln	Val
Glu	Ser	Leu
Pro	Ala	Lys
50	55	60
Ser	Gln	Pro
Gln	Asp	Gly
Asp	Leu	Gly
65	70	75
Ser	Gly	Ser
Gly	Leu	Leu
Asp	Ala	Ile
Asp	Thr	Asp
Asp	Leu	Thr
Asp	Pro	Asp
Asp	Asp	Asp
Asn	Arg	Thr
Arg	Val	Val
Arg	Glu	Glu
85	90	95
Val	Tyr	Gly
Tyr	Pro	Gly
Gly	Glu	Lys
100	105	110
Ser	Gln	Ser
Gln	Asp	Leu
Asp	Leu	Trp
Leu	Trp	Val
Leu	Asp	Asp
Asp	Leu	Leu
Asp	Pro	Asp
Asp	Asp	Asp
Asn	Arg	Thr
Arg	Val	Val
Arg	Gly	Gly
115	120	125
Ser	His	Gln
His	Arg	Ala
Gln	Ala	Ser
Ala	Ser	Arg
130	135	140
Val	Val	Leu
Val	Leu	Ser
Leu	Ser	Phe
Leu	Phe	Asp
Asp	Asn	Phe
Asn	Gly	Thr
Gly	Thr	Ser
Thr	Asp	Asp
Asp	Asn	Ser
Asn	Ser	Thr
145	150	155
Tyr	Gly	His
His	Pro	Leu
Leu	Arg	Gln
Arg	Ile	Ile
Ile	Thr	Ala
Thr	Gly	Gly
Gly	Phe	Ile
165	170	175
Phe	Met	Gly
Met	Leu	His
His	Arg	Met
Arg	Leu	Thr
Leu	Thr	Ala
Thr	Gly	Thr
Gly	Gly	Gln
180	185	190
Ala	Pro	Leu
Leu	Met	Ala
Met	Asn	Phe
Asn	Phe	Asn
Phe	Asp	Gly
Asp	Asn	Thr
Asn	Gly	Val
Gly	Thr	Val
Thr	Val	Val
Val	Gly	Gln
Gly	Asp	Trp
Asp	Arg	Asp
Arg	Gly	Asp
Gly	Ser	Gly
195	200	205
Val	Tyr	Leu
Tyr	Leu	Gln
Leu	Gln	Asp
Gln	Asp	Arg
Asp	Arg	Gly
Arg	Gly	Ser
Gly	Ser	Phe
195	215	220
Ala	Leu	His
Leu	His	Arg
His	Arg	Asp
Asp	Gly	Arg
Gly	Arg	Ile
Arg	Ile	Val
Ile	Val	Phe
Val	Phe	Gly
Phe	Gly	Tyr
Gly	Tyr	Lys
195	230	235
Ala	Leu	Asp
Leu	Asp	Ile
Asp	Ile	Ser
Ile	Ser	Ser
Ser	Ala	Gln
Gly	245	250
Asp	Ala	His
Ala	His	Pro
His	Pro	Val
Pro	Val	Lys
Val	Lys	Ala
Lys	Ala	Gly
245	250	255
Leu	Ser	Asp
Asp	Ala	Phe
Ala	Phe	Met
Phe	Met	Ile
Met	Ile	Leu
Leu	Asn	Asn
Asn	Asn	Ser
Ser	Ser	Pro
Pro	Glu	Val
Glu	Val	Pro
Val	Pro	Glu

	260	265	270
Ser Gln Arg Arg Thr Ile Phe Glu Tyr His Arg Val Glu Leu Asp Ser			
275	280	285	
Ser Lys Ile Thr Thr Thr Ser Ala Val Glu Phe Thr Pro Leu Pro Thr			
290	295	300	
Cys Leu Gln His Gln Ser Cys Asp Thr Cys Val Ser Ser Asn Leu Thr			
305	310	315	320
Phe Asn Cys Ser Trp Cys His Val Leu Gln Arg Cys Ser Ser Gly Phe			
325	330	335	
Asp Arg Tyr Arg Gln Glu Trp Leu Thr Tyr Gly Cys Ala Gln Glu Ala			
340	345	350	
Glu Gly Lys Thr Cys Glu Asp Phe Gln Asp Asp Ser His Tyr Ser Ala			
355	360	365	
Ser Pro Asp Ser Ser Phe Ser Pro Phe Asn Gly Asp Ser Thr Thr Ser			
370	375	380	
Ser Ser Leu Phe Ile Asp Ser Leu Thr Thr Glu Asp Asp Thr Lys Leu			
385	390	395	400
Asn Pro Tyr Ala Glu Gly Asp Gly Leu Pro Asp His Ser Ser Pro Lys			
405	410	415	
Ser Lys Gly Pro Pro Val His Leu Gly Thr Ile Val Gly Ile Val Leu			
420	425	430	
Ala Val Leu Val Ala Ala Ile Ile Leu Ala Gly Ile Tyr Ile Ser			
435	440	445	
Gly His Pro Asn Ser Asn Ala Ala Leu Phe Phe Ile Glu Arg Arg Pro			
450	455	460	
His His Trp Pro Ala Met Lys Phe His Asn His Pro Asn His Ser Thr			
465	470	475	480
Tyr Thr Glu Val Glu Pro Ser Gly His Glu Lys Glu Gly Phe Val Glu			
485	490	495	
Ala Glu Gln Cys			
500			
<210> 193			
<211> 530			
<212> PRT			
<213> Mus musculus			
<400> 193			
Met Ala Arg Phe Arg Arg Ala Asp Leu Ala Ala Gly Val Met Leu			
1	5	10	15
Leu Cys His Phe Leu Thr Asp Arg Phe His Phe Ala His Gly Glu Pro			
20	25	30	
Gly His His Thr Asn Asp Trp Ile Tyr Glu Val Thr Asn Ala Phe Pro			
35	40	45	
Trp Asn Glu Glu Gly Val Glu Val Asp Ser Gln Ala Tyr Asn His Arg			
50	55	60	
Trp Lys Arg Asn Val Asp Pro Phe Lys Ala Val Asp Thr Asn Arg Ala			
65	70	75	80
Ser Met Gly Gln Ala Ser Pro Glu Ser Lys Gly Phe Thr Asp Leu Leu			
85	90	95	
Leu Asp Asp Gly Gln Asp Asn Asn Thr Gln Ile Glu Glu Asp Thr Asp			
100	105	110	
His Asn Tyr Tyr Ile Ser Arg Ile Tyr Gly Pro Ala Asp Ser Ala Ser			
115	120	125	
Arg Asp Leu Trp Val Asn Ile Asp Gln Met Glu Lys Asp Lys Val Lys			
130	135	140	
Ile His Gly Ile Leu Ser Asn Thr His Arg Gln Ala Ala Arg Val Asn			
145	150	155	160
Leu Ser Phe Asp Phe Pro Phe Tyr Gly His Phe Leu Asn Glu Val Thr			
165	170	175	
Val Ala Thr Gly Gly Phe Ile Tyr Thr Gly Glu Val Val His Arg Met			

	180	185	190
Leu Thr Ala Thr Gln Tyr Ile Ala Pro Leu Met Ala Asn Phe Asp Pro			
195	200	205	
Ser Val Ser Arg Asn Ser Thr Val Arg Tyr Phe Asp Asn Gly Thr Ala			
210	215	220	
Leu Val Val Gln Trp Asp His Val His Leu Gln Asp Asn Tyr Asn Leu			
225	230	235	240
Gly Ser Phe Thr Phe Gln Ala Thr Leu Leu Met Asp Gly Arg Ile Ile			
245	250	255	
Phe Gly Tyr Lys Glu Ile Pro Val Leu Val Thr Gln Ile Ser Ser Thr			
260	265	270	
Asn His Pro Val Lys Val Gly Leu Ser Asp Ala Phe Val Val Val His			
275	280	285	
Arg Ile Gln Gln Ile Pro Asn Val Arg Arg Arg Thr Ile Tyr Glu Tyr			
290	295	300	
His Arg Val Glu Leu Gln Met Ser Lys Ile Thr Asn Ile Ser Ala Val			
305	310	315	320
Glu Met Thr Pro Leu Pro Thr Cys Leu Gln Phe Asn Gly Cys Gly Pro			
325	330	335	
Cys Val Ser Ser Gln Ile Gly Phe Asn Cys Ser Trp Cys Ser Lys Leu			
340	345	350	
Gln Arg Cys Ser Ser Gly Phe Asp Arg His Arg Gln Asp Trp Val Asp			
355	360	365	
Ser Gly Cys Pro Glu Glu Val Gln Ser Lys Glu Lys Met Cys Glu Lys			
370	375	380	
Thr Glu Pro Gly Glu Thr Ser Gln Thr Thr Thr Ser His Thr Thr			
385	390	395	400
Thr Met Gln Phe Arg Val Leu Thr Thr Thr Arg Arg Ala Val Thr Ser			
405	410	415	
Gln Met Pro Thr Ser Leu Pro Thr Glu Asp Asp Thr Lys Ile Ala Leu			
420	425	430	
His Leu Lys Asp Ser Gly Ala Ser Thr Asp Asp Ser Ala Ala Glu Lys			
435	440	445	
Lys Gly Gly Thr Leu His Ala Gly Leu Ile Val Gly Ile Leu Ile Leu			
450	455	460	
Val Leu Ile Ile Ala Ala Ala Ile Leu Val Thr Val Tyr Met Tyr His			
465	470	475	480
His Pro Thr Ser Ala Ala Ser Ile Phe Phe Ile Glu Arg Arg Pro Ser			
485	490	495	
Arg Trp Pro Ala Met Lys Phe Arg Arg Gly Ser Gly His Pro Ala Tyr			
500	505	510	
Ala Glu Val Glu Pro Val Gly Glu Lys Glu Gly Phe Ile Val Ser Glu			
515	520	525	
Gln Cys			
530			

<210> 194  
 <211> 562  
 <212> PRT  
 <213> Mus musculus

<400> 194

Met Asp Arg Ala Gly Arg Leu Gly Ala Gly Leu Arg Gly Leu Cys Val  
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 Ala Ala Leu Val Leu Val Cys Ala Gly His Gly Gly Arg Arg Glu Asp  
 20               25               30  
 Gly Gly Pro Ala Cys Tyr Gly Gly Phe Asp Leu Tyr Phe Ile Leu Asp  
 35               40               45  
 Lys Ser Gly Ser Val Leu His His Trp Asn Glu Ile Tyr Tyr Phe Val  
 50               55               60  
 Glu Gln Leu Ala His Arg Phe Ile Ser Pro Gln Leu Arg Met Ser Phe

65	70	75	80
Ile Val Phe Ser Thr Arg Gly Thr Thr	Leu Met Lys Leu Thr Glu Asp		
85	90	95	
Arg Glu Gln Ile Arg Gln Gly Leu Glu	Glu Leu Gln Lys Val Leu Pro		
100	105	110	
Gly Gly Asp Thr Tyr Met His Glu Gly Phe	Glu Arg Ala Ser Glu Gln		
115	120	125	
Ile Tyr Tyr Glu Asn Ser Gln Gly Tyr Arg	Thr Ala Ser Val Ile Ile		
130	135	140	
Ala Leu Thr Asp Gly Glu Leu His Glu Asp	Leu Phe Phe Tyr Ser Glu		
145	150	155	160
Arg Glu Ala Asn Arg Ser Arg Asp Leu	Gly Ala Ile Val Tyr Cys Val		
165	170	175	
Gly Val Lys Asp Phe Asn Glu Thr Gln	Leu Ala Arg Ile Ala Asp Ser		
180	185	190	
Lys Asp His Val Phe Pro Val Asn Asp Gly	Phe Gln Ala Leu Gln Gly		
195	200	205	
Ile Ile His Ser Ile Leu Lys Ser Cys	Ile Glu Ile Leu Ala Ala		
210	215	220	
Glu Pro Ser Thr Ile Cys Ala Gly Glu Ser	Phe Gln Val Val Val Arg		
225	230	235	240
Gly Asn Gly Phe Arg His Ala Arg Asn Val	Asp Arg Val Leu Cys Ser		
245	250	255	
Phe Lys Ile Asn Asp Ser Val Thr Leu Asn	Glu Lys Pro Phe Ala Val		
260	265	270	
Glu Asp Thr Tyr Leu Leu Cys Pro Ala Pro	Ile Leu Lys Glu Val Gly		
275	280	285	
Met Lys Ala Ala Leu Gln Val Ser Met Asn	Asp Gly Leu Ser Phe Ile		
290	295	300	
Ser Ser Ser Val Ile Ile Thr Thr His	Cys Ser Asp Gly Ser Ile		
305	310	315	320
Leu Ala Ile Ala Leu Leu Val Leu Phe	Leu Leu Ala Leu Ala Leu		
325	330	335	
Leu Trp Trp Phe Trp Pro Leu Cys Cys	Thr Val Ile Ile Lys Glu Val		
340	345	350	
Pro Pro Pro Pro Val Glu Glu Ser Glu	Glu Asp Asp Asp Gly Leu		
355	360	365	
Pro Lys Lys Trp Pro Thr Val Asp Ala	Ser Tyr Tyr Gly Gly Arg		
370	375	380	
Gly Val Gly Gly Ile Lys Arg Met Glu Val	Arg Trp Gly Glu Lys Gly		
385	390	395	400
Ser Thr Glu Glu Gly Ala Lys Leu Glu	Lys Ala Lys Asn Ala Arg Val		
405	410	415	
Lys Met Pro Glu Gln Glu Tyr Glu Phe	Pro Glu Pro Arg Asn Leu Asn		
420	425	430	
Asn Asn Met Arg Arg Pro Ser Ser	Pro Arg Lys Trp Tyr Ser Pro Ile		
435	440	445	
Lys Gly Lys Leu Asp Ala Leu Trp Val	Leu Leu Arg Lys Gly Tyr Asp		
450	455	460	
Arg Val Ser Val Met Arg Pro Gln Pro	Gly Asp Thr Gly Arg Cys Ile		
465	470	475	480
Asn Phe Thr Arg Val Lys Asn Ser Gln	Pro Ala Lys Tyr Pro Leu Asn		
485	490	495	
Asn Thr Tyr His Pro Ser Ser Pro	Pro Pro Ala Pro Ile Tyr Thr Pro		
500	505	510	
Pro Pro Pro Ala Pro His Cys Pro	Pro Pro Pro Ala Pro Ser Ala Pro Thr		
515	520	525	
Pro Pro Ile Pro Ser Pro Pro Ser Thr	Leu Pro Pro Pro Pro Gln Ala		
530	535	540	
Pro Pro Pro Asn Arg Ala Pro Pro Pro	Ser Arg Pro Pro Pro Arg Pro		
545	550	555	560

Ser Val

<210> 195  
<211> 2565  
<212> DNA  
<213> Homo sapiens

<400> 195

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acccttgggc	tgctgagccc	cgtccgcct	gcggccccag	cagctgtac	gctcttcc	120
cacggcccg	caccttctcg	gaggcctggc	ggcctgccc	cgagctgggg	ggcacctgg	180
ccacttctcg	gaccccccag	gaggcccagc	gtgtggacag	ccttgggtt	gcgggcccag	240
ccaggccggc	gctgtggatc	gggcgtcagc	ggcaggccc	gcaatgccag	ctgcagcgcc	300
cactgcgcgg	cttcacgtgg	accacagggg	accaggacac	ggcttcacc	aactgggccc	360
agccagcctc	tggaggcccc	tgccggggcc	agcgctgtgt	ggccctggag	gcaagtggcg	420
agcaccgctg	gctggagggg	tcgtgcacgc	tggctgtcga	cggcaccc	tgccagttt	480
gcttcgaggg	cgcctgcgg	gctgtcaag	atgaggccgg	ccaggccggc	ccagccgtgt	540
ataccacgcc	cttccacctg	gtctccacag	agttttagt	gctgccttc	ggctctgtgg	600
ccgctgtgca	gtgccaggct	ggcagggggg	cctctctgt	ctgcgtgaag	cagcctgagg	660
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acgggggctg	cgaacacaa	tgtgtggagg	aggtggatgg	tcacgtgtcc	tgccgctgca	780
ctgagggctt	ccggctgca	gcagacgggc	gcagttgcga	ggaccctgt	gcccaggctc	840
cgtgcgagca	gcagtgtgag	cccggtgggc	cacaaggcta	cagctgccac	tgccgcttgg	900
gtttccggcc	agcggaggat	gatccgcacc	gctgtgtgga	cacagatgag	tgccagattt	960
ccggtgtgt	ccagcagat	tgtcaact	acgttgggg	cttcgagtgt	tattgttagcg	1020
aggacatga	gctggaggt	gatggcatca	gctgcagccc	tgcaaggggcc	atgggtggcc	1080
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cctaccactc	ctcagtgtc	tccgtcaccc	ggcctgtgg	ggtctctgc	acgcataccca	1380
caactgcctc	tgcccaccag	cctctgtga	tccctgcac	acacccagct	ttgtcccgtg	1440
accaccatgc	ccccgtgatc	gcagccaact	atccagatct	gcctctgc	taccaacccg	1500
gtattctctc	tgtctctcat	tcagcacagc	ctcctgcca	ccagccccc	atgatctcaa	1560
ccaaataatgc	ggagcttcc	cctgcccacc	agtccccc	gttccagac	acccgggtcg	1620
ctggcacccca	gaccacca	cattgtctg	gaatcccacc	taaccatgcc	cctctggtca	1680
ccaccctcg	tgcccagcta	ccccctcaag	ccccagatgc	ccttgcctc	agaacccagg	1740
ccaccctcg	ccccattatc	ccaactgccc	agccctctc	gaccaccc	tccaggtccc	1800
ctgtgtctcc	tgcccataa	atctctgtgc	ctgctgcac	ccagccccc	gcccctccca	1860
ccctctcgcc	ctctcagagc	cccactaacc	agacctcacc	catcagccct	acacatcccc	1920
attccaaagc	cccccaaatac	ccaagggaa	atggccccc	tcccaagttt	gcccctgtgg	1980
tgccctcacc	agctcccaca	gcagcccaa	cagccctgg	ggaggctgg	tttgcgcagc	2040
acagccagag	ggatgaccgg	tggctgtgg	tggactct	ggtgccaacg	tgtgtcttt	2100
tgggtgtcct	gtttgcactg	ggcatcggt	actgcaccc	ctgtggccccc	catgcaccca	2160
acaagcgat	cactgactgc	tatcgctgg	tcatccatgc	tggagcaag	agcccaacag	2220
aacccatgcc	ccccaggggc	agcctcacag	gggtgcagac	ctgcagaacc	agcgtgttat	2280
gggggtgcaga	ccccctcat	ggagatggg	gctgcgtggaca	catgcccggg	gctgcaccc	2340
ggacccatgg	gggctgccc	gctggacaga	tggcttcctg	ctcccccaggc	ccagccagg	2400
tcctctctca	accactagac	ttggctctca	ggaactctgc	ttctggccc	agcgctcg	2460
accaaggata	caccaaaggcc	cttaagaccc	cagggggccgg	gtgctgggt	cttctccaa	2520
aatgggggt	tcaacctaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaa		2565

<210> 196  
<211> 757  
<212> PRT  
<213> Homo sapiens

<400> 196

Met Leu Leu Arg Leu Leu Ala Trp Ala Ala Gly Pro Thr Leu  
1 5 10 15

Gly Gln Asp Pro Trp Ala Ala Glu Pro Arg Ala Ala Cys Gly Pro Ser  
     20                       25                       30  
 Ser Cys Tyr Ala Leu Phe Pro Arg Arg Arg Thr Phe Leu Glu Ala Trp  
     35                       40                       45  
 Arg Ala Cys Arg Glu Leu Gly Gly Asp Leu Ala Thr Pro Arg Thr Pro  
     50                       55                       60  
 Glu Glu Ala Gln Arg Val Asp Ser Leu Val Gly Ala Gly Pro Ala Ser  
     65                       70                       75                       80  
 Arg Leu Leu Trp Ile Gly Leu Gln Arg Gln Ala Arg Gln Cys Gln Leu  
     85                       90                       95  
 Gln Arg Pro Leu Arg Gly Phe Thr Trp Thr Gly Asp Gln Asp Thr  
     100                       105                       110  
 Ala Phe Thr Asn Trp Ala Gln Pro Ala Ser Gly Gly Pro Cys Pro Ala  
     115                       120                       125  
 Gln Arg Cys Val Ala Leu Glu Ala Ser Gly Glu His Arg Trp Leu Glu  
     130                       135                       140  
 Gly Ser Cys Thr Leu Ala Val Asp Gly Tyr Leu Cys Gln Phe Gly Phe  
     145                       150                       155                       160  
 Glu Gly Ala Cys Pro Ala Leu Gln Asp Glu Ala Gly Gln Ala Gly Pro  
     165                       170                       175  
 Ala Val Tyr Thr Pro Phe His Leu Val Ser Thr Glu Phe Glu Trp  
     180                       185                       190  
 Leu Pro Phe Gly Ser Val Ala Ala Val Gln Cys Gln Ala Gly Arg Gly  
     195                       200                       205  
 Ala Ser Leu Leu Cys Val Lys Gln Pro Glu Gly Gly Val Gly Trp Ser  
     210                       215                       220  
 Arg Ala Gly Pro Leu Cys Leu Gly Thr Gly Cys Ser Pro Asp Asn Gly  
     225                       230                       235                       240  
 Gly Cys Glu His Glu Cys Val Glu Glu Val Asp Gly His Val Ser Cys  
     245                       250                       255  
 Arg Cys Thr Glu Gly Phe Arg Leu Ala Ala Asp Gly Arg Ser Cys Glu  
     260                       265                       270  
 Asp Pro Cys Ala Gln Ala Pro Cys Glu Gln Gln Cys Glu Pro Gly Gly  
     275                       280                       285  
 Pro Gln Gly Tyr Ser Cys His Cys Arg Leu Gly Phe Arg Pro Ala Glu  
     290                       295                       300  
 Asp Asp Pro His Arg Cys Val Asp Thr Asp Glu Cys Gln Ile Ala Gly  
     305                       310                       315                       320  
 Val Cys Gln Gln Met Cys Val Asn Tyr Val Gly Gly Phe Glu Cys Tyr  
     325                       330                       335  
 Cys Ser Glu Gly His Glu Leu Glu Ala Asp Gly Ile Ser Cys Ser Pro  
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 Ala Gly Ala Met Gly Ala Gln Ala Ser Gln Asp Leu Gly Asp Glu Leu  
     355                       360                       365  
 Leu Asp Asp Gly Glu Asp Glu Glu Asp Glu Asp Glu Ala Trp Lys Ala  
     370                       375                       380  
 Phe Asn Gly Gly Trp Thr Glu Met Pro Gly Ile Leu Trp Met Glu Pro  
     385                       390                       395                       400  
 Thr Gln Pro Pro Asp Phe Ala Leu Ala Tyr Arg Pro Ser Phe Pro Glu  
     405                       410                       415  
 Asp Arg Glu Pro Gln Ile Pro Tyr Pro Glu Pro Thr Trp Pro Pro Pro  
     420                       425                       430  
 Leu Ser Ala Pro Arg Val Pro Tyr His Ser Ser Val Leu Ser Val Thr  
     435                       440                       445  
 Arg Pro Val Val Val Ser Ala Thr His Pro Thr Leu Pro Ser Ala His  
     450                       455                       460  
 Gln Pro Pro Val Ile Pro Ala Thr His Pro Ala Leu Ser Arg Asp His  
     465                       470                       475                       480  
 Gln Ile Pro Val Ile Ala Ala Asn Tyr Pro Asp Leu Pro Ser Ala Tyr  
     485                       490                       495  
 Gln Pro Gly Ile Leu Ser Val Ser His Ser Ala Gln Pro Pro Ala His

	500	505	510												
Gln	Pro	Pro	Met	Ile	Ser	Thr	Lys	Tyr	Pro	Glu	Leu	Phe	Pro	Ala	His
515							520					525			
Gln	Ser	Pro	Met	Phe	Pro	Asp	Thr	Arg	Val	Ala	Gly	Thr	Gln	Thr	Thr
530						535					540				
Thr	His	Leu	Pro	Gly	Ile	Pro	Pro	Asn	His	Ala	Pro	Leu	Val	Thr	Thr
545						550					555			560	
Leu	Gly	Ala	Gln	Leu	Pro	Pro	Gln	Ala	Pro	Asp	Ala	Leu	Val	Leu	Arg
						565				570			575		
Thr	Gln	Ala	Thr	Gln	Leu	Pro	Ile	Ile	Pro	Thr	Ala	Gln	Pro	Ser	Leu
						580				585			590		
Thr	Thr	Thr	Ser	Arg	Ser	Pro	Val	Ser	Pro	Ala	His	Gln	Ile	Ser	Val
						595				600			605		
Pro	Ala	Ala	Thr	Gln	Pro	Ala	Ala	Leu	Pro	Thr	Leu	Leu	Pro	Ser	Gln
						610				615			620		
Ser	Pro	Thr	Asn	Gln	Thr	Ser	Pro	Ile	Ser	Pro	Thr	His	Pro	His	Ser
						625				630			635		640
Lys	Ala	Pro	Gln	Ile	Pro	Arg	Glu	Asp	Gly	Pro	Ser	Pro	Lys	Leu	Ala
						645				650			655		
Leu	Trp	Leu	Pro	Ser	Pro	Ala	Pro	Thr	Ala	Ala	Pro	Thr	Ala	Leu	Gly
						660				665			670		
Glu	Ala	Gly	Leu	Ala	Glu	His	Ser	Gln	Arg	Asp	Asp	Arg	Trp	Leu	Leu
						675				680			685		
Val	Ala	Leu	Leu	Val	Pro	Thr	Cys	Val	Phe	Leu	Val	Val	Leu	Leu	Ala
						690				695			700		
Leu	Gly	Ile	Val	Tyr	Cys	Thr	Arg	Cys	Gly	Pro	His	Ala	Pro	Asn	Lys
						705				710			715		720
Arg	Ile	Thr	Asp	Cys	Tyr	Arg	Trp	Val	Ile	His	Ala	Gly	Ser	Lys	Ser
						725				730			735		
Pro	Thr	Glu	Pro	Met	Pro	Pro	Arg	Gly	Ser	Leu	Thr	Gly	Val	Gln	Thr
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Cys	Arg	Thr	Ser	Val											
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<210> 197  
 <211> 2973  
 <212> DNA  
 <213> Homo sapiens

<400> 197

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gcaggcagct	cccccgagct	cccgccgtt	ccaggcagct	ctctgagccg	tgccagaggc	180
ccggcccgcc	attcccagcc	ccgagccatg	atgaagactt	tgtccagccgg	gaactgcacg	240
ctcgtgtgc	ccgccaaaaaa	ctcataccgc	atgggtggtc	tgggtgcctc	tcgggtgggc	300
aagagctcca	tctgtgtctcg	cttcctcaat	ggccgctttg	aggaccagta	cacacccacc	360
atcgaggact	tccaccgtaa	ggtataacaac	atccgcggcg	acatgtacca	gctcgacatc	420
ctggataacct	ctggcaacca	ccccctccccc	gccatgcgc	ggctgtccat	cctcacaggg	480
gatgtttca	tcttgtgttgc	cagcctggat	aaccggggagt	ccttcgtatga	ggtcaagcgc	540
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<210> 198

<211> 266

<212> PRT

<213> Homo sapiens

<400> 198

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				20				25					30		
Ser	Ser	Ile	Val	Ser	Arg	Phe	Leu	Asn	Gly	Arg	Phe	Glu	Asp	Gln	Tyr
				35			40					45			
Thr	Pro	Thr	Ile	Glu	Asp	Phe	His	Arg	Lys	Val	Tyr	Asn	Ile	Arg	Gly
				50			55				60				
Asp	Met	Tyr	Gln	Leu	Asp	Ile	Leu	Asp	Thr	Ser	Gly	Asn	His	Pro	Phe
	65			70				75				80			
Pro	Ala	Met	Arg	Arg	Leu	Ser	Ile	Leu	Thr	Gly	Asp	Val	Phe	Ile	Leu
				85			90					95			
Val	Phe	Ser	Leu	Asp	Asn	Arg	Glu	Ser	Phe	Asp	Glu	Val	Lys	Arg	Leu
			100				105					110			
Gln	Lys	Gln	Ile	Leu	Glu	Val	Lys	Ser	Cys	Leu	Lys	Asn	Lys	Thr	Lys
			115			120					125				
Glu	Ala	Ala	Glu	Leu	Pro	Met	Val	Ile	Cys	Gly	Asn	Lys	Asn	Asp	His
			130			135					140				
Gly	Glu	Leu	Cys	Arg	Gln	Val	Pro	Thr	Thr	Glu	Ala	Glu	Leu	Val	
	145				150				155				160		
Ser	Gly	Asp	Glu	Asn	Cys	Ala	Tyr	Phe	Glu	Val	Ser	Ala	Lys	Asn	
				165				170					175		
Thr	Asn	Val	Asp	Glu	Met	Phe	Tyr	Val	Leu	Phe	Ser	Met	Ala	Lys	Leu
			180			185					190				
Pro	His	Glu	Met	Ser	Pro	Ala	Leu	His	Arg	Lys	Ile	Ser	Val	Gln	Tyr

195	200	205
Gly Asp Ala Phe His Pro Arg Pro Phe Cys Met Arg Arg Val Lys Glu		
210	215	220
Met Asp Ala Tyr Gly Met Val Ser Pro Phe Ala Arg Arg Pro Ser Val		
225	230	235
Asn Ser Asp Leu Lys Tyr Ile Lys Ala Lys Val Leu Arg Glu Gly Gln		
245	250	255
Ala Arg Glu Arg Asp Lys Cys Thr Ile Gln		
260	265	

<210> 199  
 <211> 2159  
 <212> DNA  
 <213> Homo sapiens

<400> 199

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gattggcagt	atggagttac	tcaggccttc	cctcacacag	aggaggaggt	ggaagttgat	180
tcacacgcgt	acagccacag	gtggaaaaga	aacttgact	ttctcaaggc	gttagacacg	240
aaccgagcaa	gcgtcgccca	agactctct	gagcccagaa	gcttcacaga	cctgctgtg	300
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tctcgaatat	atggccatc	tgattctgcc	agccgggatt	tatgggtgaa	catagaccaa	420
atggaaaaag	ataaaagtga	gattcatgga	atattgtcca	atactcatcg	gcaagctgca	480
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ggatttgatc	gtcatcgcc	ggactgggt	gacagtggat	gccctgaaga	gtcaaaagag	1140
aagatgtgtg	agaatacaga	accagtggaa	acttcttctc	gaaccaccac	aaccatagga	1200
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gcttctacag	atgacagtgc	agctgagaag	aaagggggaa	ccctccacgc	tggcctcatc	1380
gttgaatcc	tcatcctgtt	cctcattgtt	gccacagcca	ttcttgtgac	agtctatatg	1440
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gtggacttat	ctgaagtatg	acaagattat	aatgcttttgc	gcttaggtgc	agggttgc当地	1920
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<210> 200  
 <211> 529  
 <212> PRT  
 <213> Homo sapiens

<400> 200

Met Ala Arg Phe Pro Lys Ala Asp Leu Ala Ala Ala Gly Val Met Leu		
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		15

Leu Cys His Phe Phe Thr Asp Gln Phe Gln Phe Ala Asp Gly Lys Pro  
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 Gly Asp Gln Ile Leu Asp Trp Gln Tyr Gly Val Thr Gln Ala Phe Pro  
     35                       40                       45  
 His Thr Glu Glu Glu Val Glu Val Asp Ser His Ala Tyr Ser His Arg  
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 Trp Lys Arg Asn Leu Asp Phe Leu Lys Ala Val Asp Thr Asn Arg Ala  
     65                       70                       75                       80  
 Ser Val Gly Gln Asp Ser Pro Glu Pro Arg Ser Phe Thr Asp Leu Leu  
     85                       90                       95  
 Leu Asp Asp Gly Gln Asp Asn Asn Thr Gln Ile Glu Glu Asp Thr Asp  
     100                       105                       110  
 His Asn Tyr Tyr Ile Ser Arg Ile Tyr Gly Pro Ser Asp Ser Ala Ser  
     115                       120                       125  
 Arg Asp Leu Trp Val Asn Ile Asp Gln Met Glu Lys Asp Lys Val Lys  
     130                       135                       140  
 Ile His Gly Ile Leu Ser Asn Thr His Arg Gln Ala Ala Arg Val Asn  
     145                       150                       155                       160  
 Leu Ser Phe Asp Phe Pro Phe Tyr Gly His Phe Leu Arg Glu Ile Thr  
     165                       170                       175  
 Val Ala Thr Gly Gly Phe Ile Tyr Thr Gly Glu Val Val His Arg Met  
     180                       185                       190  
 Leu Thr Ala Thr Gln Tyr Ile Ala Pro Leu Met Ala Asn Phe Asp Pro  
     195                       200                       205  
 Ser Val Ser Arg Asn Ser Thr Val Arg Tyr Phe Asp Asn Gly Thr Ala  
     210                       215                       220  
 Leu Val Val Gln Trp Asp His Val His Leu Gln Asp Asn Tyr Asn Leu  
     225                       230                       235                       240  
 Gly Ser Phe Thr Phe Gln Ala Thr Leu Leu Met Asp Gly Arg Ile Ile  
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 Phe Gly Tyr Lys Glu Ile Pro Val Leu Val Thr Gln Ile Ser Ser Thr  
     260                       265                       270  
 Asn His Pro Val Lys Val Gly Leu Ser Asp Ala Phe Val Val Val His  
     275                       280                       285  
 Arg Ile Gln Gln Ile Pro Asn Val Arg Arg Arg Thr Ile Tyr Glu Tyr  
     290                       295                       300  
 His Arg Val Glu Leu Gln Met Ser Lys Ile Thr Asn Ile Ser Ala Val  
     305                       310                       315                       320  
 Glu Met Thr Pro Leu Pro Thr Cys Leu Gln Phe Asn Arg Cys Gly Pro  
     325                       330                       335  
 Cys Val Ser Ser Gln Ile Gly Phe Asn Cys Ser Trp Cys Ser Lys Leu  
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 Gln Arg Cys Ser Ser Gly Phe Asp Arg His Arg Gln Asp Trp Val Asp  
     355                       360                       365  
 Ser Gly Cys Pro Glu Glu Ser Lys Glu Lys Met Cys Glu Asn Thr Glu  
     370                       375                       380  
 Pro Val Glu Thr Ser Ser Arg Thr Thr Thr Ile Gly Ala Thr Thr  
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 Thr Gln Phe Arg Val Leu Thr Thr Arg Arg Ala Val Thr Ser Gln  
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 Phe Pro Thr Ser Leu Pro Thr Glu Asp Asp Thr Lys Ile Ala Leu His  
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 Leu Lys Asp Asn Gly Ala Ser Thr Asp Asp Ser Ala Ala Glu Lys Lys  
     435                       440                       445  
 Gly Gly Thr Leu His Ala Gly Leu Ile Val Gly Ile Leu Ile Leu Val  
     450                       455                       460  
 Leu Ile Val Ala Thr Ala Ile Leu Val Thr Val Tyr Met Tyr His His  
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 Pro Thr Ser Ala Ala Ser Ile Phe Phe Ile Glu Arg Arg Pro Ser Arg  
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 Trp Pro Ala Met Lys Phe Arg Arg Gly Ser Gly His Pro Ala Tyr Ala

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Cys															

<210> 201  
<211> 2608  
<212> DNA  
<213> Homo sapiens

<400> 201

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<212> PRT  
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<400> 202

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Glu Met Phe Arg Glu Val Glu Glu Leu Met Glu Asp Thr Gln His Lys  
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Leu Arg Ser Ala Val Glu Glu Met Glu Ala Glu Glu Ala Ala Ala Lys  
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Ala Ser Ser Glu Val Asn Leu Ala Asn Leu Pro Pro Ser Tyr His Asn  
85 90 95  
Glu Thr Asn Thr Asp Thr Lys Val Gly Asn Asn Thr Ile His Val His  
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Arg Glu Ile His Lys Ile Thr Asn Asn Gln Thr Gly Gln Met Val Phe  
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His Glu Cys Ile Ile Asp Glu Asp Cys Gly Pro Ser Met Tyr Cys Gln  
145 150 155 160  
Phe Ala Ser Phe Gln Tyr Thr Cys Gln Pro Cys Arg Gly Gln Arg Met  
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210 215 220  
Gly Leu Leu Phe Pro Val Cys Thr Pro Leu Pro Val Glu Gly Glu Leu  
225 230 235 240  
Cys His Asp Pro Ala Ser Arg Leu Leu Asp Leu Ile Thr Trp Glu Leu  
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Glu Pro Asp Gly Ala Leu Asp Arg Cys Pro Cys Ala Ser Gly Leu Leu  
260 265 270  
Cys Gln Pro His Ser His Ser Leu Val Tyr Val Cys Lys Pro Thr Phe  
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Pro Asp Glu Tyr Glu Val Gly Ser Phe Met Glu Glu Val Arg Gln Glu  
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<212> DNA

<213> Homo sapiens

<400> 203

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Pro Leu Ala Ala Pro Ala Gln Pro Arg Pro Leu Arg Ser Leu Ser Pro  
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Ala Gly Ala Arg Ala Ser Cys Ser Ser Ser Ser Ile Ala Ala Ser Tyr  
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Pro Val Ser Arg Ser Arg Ala Ala Ser Ser Ser Glu Glu Glu Glu  
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 Arg Gly Ser Asn Pro Leu Asp Gly Arg Asp Ser Pro Ser Ala Gly Gly  
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 Pro Val Gly Gln Leu Glu Pro Ile Pro Ile Pro Ala Pro Ala Ser Pro  
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Gln Tyr Met Leu Asn Leu His Ser Gly Glu Val	Pro Ala Pro Val Pro	
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Lys Pro Pro Glu Ala Ala Arg Pro Ala Asp Glu Pro	Thr Pro Ala Ser	1040
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Leu Asn Ala Lys Asp Ala Val Arg Val Ala Lys	Glu Ala Arg Pro Ala	
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Val Lys Ala Ile Gly Gly Lys Asp Arg Ser Leu	Phe Leu Phe Thr	
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1315	1320	1325
Arg Ser Ser Met Ser Leu Tyr Thr Ala Ala Ser	Val Ile Asp Thr Ala	
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Ser Lys Tyr Lys Met Leu Trp Lys Leu Pro	Leu Glu Asp Ala Asp Ile	
1345	1350	1355
Ile Lys Gly Ala Ser Gln Ala Thr Asn Arg	Glu Asn Ile Gln Lys Ala	
1365	1370	1375
Ile Ser Arg Leu Asp Glu Asp Leu Thr Thr Leu	Gly Gln Met Ser Lys	
1380	1385	1390
Leu Ser Glu Ser Leu Gly Phe Pro His Gln Ser	Leu Asp Asp Ala Leu	
1395	1400	1405
Arg Asp Leu Ser Ala Ala Met His Arg Asp Leu	Ser Glu Lys Gln Ala	
1410	1415	1420

Leu Cys Tyr Ala Leu Ser Phe Pro Pro Thr Lys Leu Glu Leu Cys Ala  
 1425 1430 1435 1440  
 Thr Arg Pro Glu Gly Thr Asp Ser Tyr Ile Phe Glu Phe Pro His Pro  
 1445 1450 1455  
 Asp Ala Arg Leu Gly Phe Glu Gln Ala Phe Asp Glu Ala Lys Arg Lys  
 1460 1465 1470  
 Leu Ala Ser Ser Lys Ser Cys Leu Asp Pro Glu Phe Leu Lys Ala Ile  
 1475 1480 1485  
 Pro Ile Met Lys Thr Arg Ser Gly Met Gln Phe Ser Cys Ala Ala Pro  
 1490 1495 1500  
 Thr Leu Asn Ser Cys Pro Glu Pro Ser Pro Glu Val Trp Val Cys Asn  
 1505 1510 1515 1520  
 Ser Asp Gly Tyr Val Gly Gln Val Cys Leu Leu Ser Leu Arg Ala Glu  
 1525 1530 1535  
 Pro Asp Val Glu Ala Cys Ile Ala Val Cys Ser Ala Arg Ile Leu Cys  
 1540 1545 1550  
 Ile Gly Ala Val Pro Gly Leu Gln Pro Arg Cys His Arg Glu Pro Pro  
 1555 1560 1565  
 Pro Ser Leu Arg Ser Pro Pro Glu Thr Ala Pro Glu Pro Ala Gly Pro  
 1570 1575 1580  
 Glu Leu Asp Val Glu Ala Ala Ala Asp Glu Glu Ala Ala Thr Leu Ala  
 1585 1590 1595 1600  
 Glu Pro Gly Pro Gln Pro Cys Leu His Ile Ser Ile Ala Gly Ser Gly  
 1605 1610 1615  
 Leu Glu Met Thr Pro Gly Leu Gly Glu Asp Pro Arg Pro Glu Leu  
 1620 1625 1630  
 Val Pro Phe Asp Ser Asp Ser Asp Asp Glu Ser Ser Pro Ser Pro Ser  
 1635 1640 1645  
 Gly Thr Leu Gln Ser Gln Ala Ser Arg Ser Thr Ile Ser Ser Ser Phe  
 1650 1655 1660  
 Gly Asn Glu Glu Thr Pro Ser Ser Lys Glu Ala Thr Ala Glu Thr Thr  
 1665 1670 1675 1680  
 Ser Ser Glu Glu Gln Glu Pro Gly Phe Leu Pro Leu Ser Gly Ser  
 1685 1690 1695  
 Phe Gly Pro Gly Gly Pro Cys Gly Thr Ser Pro Met Asp Gly Arg Ala  
 1700 1705 1710  
 Leu Arg Arg Ser Ser His Gly Ser Phe Thr Arg Gly Ser Leu Glu Asp  
 1715 1720 1725  
 Leu Leu Ser Val Asp Pro Glu Ala Tyr Gln Ser Ser Val Trp Leu Gly  
 1730 1735 1740  
 Thr Glu Asp Gly Cys Val His Val Tyr Gln Ser Ser Asp Ser Ile Arg  
 1745 1750 1755 1760  
 Asp Arg Arg Asn Ser Met Lys Leu Gln His Ala Ala Ser Val Thr Cys  
 1765 1770 1775  
 Ile Leu Tyr Leu Asn Asn Gln Val Phe Val Ser Leu Ala Asn Gly Glu  
 1780 1785 1790  
 Leu Val Val Tyr Gln Arg Glu Ala Gly His Phe Trp Asp Pro Gln Asn  
 1795 1800 1805  
 Phe Lys Ser Val Thr Leu Gly Thr Gln Gly Ser Pro Ile Thr Lys Met  
 1810 1815 1820  
 Val Ser Val Gly Gly Arg Leu Trp Cys Gly Cys Gln Asn Arg Val Leu  
 1825 1830 1835 1840  
 Val Leu Ser Pro Asp Thr Leu Gln Leu Glu His Met Phe Tyr Val Gly  
 1845 1850 1855  
 Gln Asp Ser Ser Arg Cys Val Ala Cys Met Val Asp Ser Ser Leu Gly  
 1860 1865 1870  
 Val Trp Val Thr Leu Lys Gly Ser Ala His Val Cys Leu Tyr His Pro  
 1875 1880 1885  
 Asp Thr Phe Glu Gln Leu Ala Glu Val Asp Val Thr Pro Pro Val His  
 1890 1895 1900  
 Arg Met Leu Ala Gly Ser Asp Ala Ile Ile Arg Gln His Lys Ala Ala

1905	1910	1915	1920
Cys Leu Arg Ile Thr Ala Leu Leu Val Cys Glu Glu Leu Leu Trp Val			
1925	1930	1935	
Gly Thr Ser Ala Gly Val Val Leu Thr Met Pro Thr Ser Pro Gly Thr			
1940	1945	1950	
Val Ser Cys Pro Arg Ala Pro Leu Ser Pro Thr Gly Leu Gly Gln Gly			
1955	1960	1965	
His Thr Gly His Val Arg Phe Leu Ala Ala Val Gln Leu Pro Asp Gly			
1970	1975	1980	
Phe Asn Leu Leu Cys Pro Thr Pro Pro Pro Asp Thr Gly Pro			
1985	1990	1995	2000
Glu Lys Leu Pro Ser Leu Glu His Arg Asp Ser Pro Trp His Arg Gly			
2005	2010	2015	
Pro Ala Pro Ala Arg Pro Lys Met Leu Val Ile Ser Gly Gly Asp Gly			
2020	2025	2030	
Tyr Glu Asp Phe Arg Leu Ser Ser Gly Gly Ser Ser Ser Glu Thr			
2035	2040	2045	
Val Gly Arg Asp Asp Ser Thr Asn His Leu Leu Leu Trp Arg Val			
2050	2055	2060	

<210> 205  
 <211> 2247  
 <212> DNA  
 <213> Homo sapiens

<400> 205

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cccccgtgtg	gcgtgccccga	cccatctgtat	gggctgtagtg	cccgcaaccg	acagaaggagg	300
ttcgtgtctt	ctggccggcg	ctgggagaag	acggaccta	cctacaggat	ctttcgggatc	360
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gacttcgcca	ggtactggca	tggggacgac	ctggcggtt	atgggcctgg	gggcacatcctg	540
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ctggctgaca	atccctggaaa	tctgttctcc	agaatccagg	ccaaaaagtt	cacagtcaaa	2040
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tcctgtccca ggccggatcc tcctgaagcc ctttgcag cactgctatc ctccaaagcc 2160  
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gattgtcatt aaacacagtt gtttct 2247

<210> 206  
<211> 488  
<212> PRT  
<213> Homo sapiens

<400> 206  
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Ala Leu Pro Pro Asp Val His His Leu His Ala Glu Arg Arg Gly Pro  
35 40 45  
Gln Pro Trp His Ala Ala Leu Pro Ser Ser Pro Ala Pro Ala Pro Ala  
50 55 60  
Thr Gln Glu Ala Pro Arg Pro Ala Ser Ser Leu Arg Pro Pro Arg Cys  
65 70 75 80  
Gly Val Pro Asp Pro Ser Asp Gly Leu Ser Ala Arg Asn Arg Gln Lys  
85 90 95  
Arg Phe Val Leu Ser Gly Gly Arg Trp Glu Lys Thr Asp Leu Thr Tyr  
100 105 110  
Arg Ile Leu Arg Phe Pro Trp Gln Leu Val Gln Glu Gln Val Arg Gln  
115 120 125  
Thr Met Ala Glu Ala Leu Lys Val Trp Ser Asp Val Thr Pro Leu Thr  
130 135 140  
Phe Thr Glu Val His Glu Gly Arg Ala Asp Ile Met Ile Asp Phe Ala  
145 150 155 160  
Arg Tyr Trp His Gly Asp Asp Leu Pro Phe Asp Gly Pro Gly Ile  
165 170 175  
Leu Ala His Ala Phe Phe Pro Lys Thr His Arg Glu Gly Asp Val His  
180 185 190  
Phe Asp Tyr Asp Glu Thr Trp Thr Ile Gly Asp Asp Gln Gly Thr Asp  
195 200 205  
Leu Leu Gln Val Ala Ala His Glu Phe Gly His Val Leu Gly Leu Gln  
210 215 220  
His Thr Thr Ala Ala Lys Ala Leu Met Ser Ala Phe Tyr Thr Phe Arg  
225 230 235 240  
Tyr Pro Leu Ser Leu Ser Pro Asp Asp Cys Arg Gly Val Gln His Leu  
245 250 255  
Tyr Gly Gln Pro Trp Pro Thr Val Thr Ser Arg Thr Pro Ala Leu Gly  
260 265 270  
Pro Gln Ala Gly Ile Asp Thr Asn Glu Ile Ala Pro Leu Glu Pro Asp  
275 280 285  
Ala Pro Pro Asp Ala Cys Glu Ala Ser Phe Asp Ala Val Ser Thr Ile  
290 295 300  
Arg Gly Glu Leu Phe Phe Lys Ala Gly Phe Val Trp Arg Leu Arg  
305 310 315 320  
Gly Gly Gln Leu Gln Pro Gly Tyr Pro Ala Leu Ala Ser Arg His Trp  
325 330 335  
Gln Gly Leu Pro Ser Pro Val Asp Ala Ala Phe Glu Asp Ala Gln Gly  
340 345 350  
His Ile Trp Phe Phe Gln Gly Ala Gln Tyr Trp Val Tyr Asp Gly Glu  
355 360 365  
Lys Pro Val Leu Gly Pro Ala Pro Leu Thr Glu Leu Gly Leu Val Arg  
370 375 380  
Phe Pro Val His Ala Ala Leu Val Trp Gly Pro Glu Lys Asn Lys Ile  
385 390 395 400  
Tyr Phe Phe Arg Gly Arg Asp Tyr Trp Arg Phe His Pro Ser Thr Arg

405	410	415
Arg Val Asp Ser Pro Val Pro Arg Arg Ala Thr Asp Trp Arg Gly Val		
420	425	430
Pro Ser Glu Ile Asp Ala Ala Phe Gln Asp Ala Asp Gly Tyr Ala Tyr		
435	440	445
Phe Leu Arg Gly Arg Leu Tyr Trp Lys Phe Asp Pro Val Lys Val Lys		
450	455	460
Ala Leu Glu Gly Phe Pro Arg Leu Val Gly Pro Asp Phe Phe Gly Cys		
465	470	475
Ala Glu Pro Ala Asn Thr Phe Leu		
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<210> 207  
<211> 3074  
<212> DNA  
<213> Homo sapiens

<400> 207

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tgagccgctg	agccgggcaa	accggcggcc	accgagccag	cggacccctcg	gagcgcagcc	180
ctgcgcggcg	gagcaggctc	caaccaggcg	gcgcacggcg	cacacgcacc	gagccagcga	240
ccccgggcg	acgcgcgggg	ccagggagcg	ctacgatgg	ggcgctaatt	gccccgggcg	300
cgctcacggg	tcccctgagg	ggcgcctgtc	tcctgggctg	cctgctgagc	cacgcccggc	360
ccgcgcggc	gcccacatcatc	aagtcccccg	gcgcgtgcgc	ccccaaaacg	gacaaagagt	420
tggcagtgc	atacctgaac	accctctatg	gctgccccaa	ggagagctgc	aacctgtttg	480
tgctgaagga	cacactaaag	aagatgcaga	agttcttttg	actgc(cc)ag	acaggtgatc	540
ttgaccagaa	taccatcgag	accatgcgg	agccacgcgt	cggcaaccca	gatgtggcca	600
actacaactt	cttccctcgc	aagcccaagt	gggacaagaa	ccagatcaca	tacaggatca	660
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aagtctggag	cgatgtgacc	ccactgcgg	tttctcgaaat	ccatgatgg	gaggcagaca	780
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gactcctggc	tcatgccttc	gccccaggca	ctgggttgtt	gggagactcc	cattttgatg	900
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gcaagtacgg	cttctgtccc	catgaagccc	tgttcaccat	ggggcgcaac	gctgaaggac	1140
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aaaaaaaaaa	aaaa					3074

<210> 208  
 <211> 660  
 <212> PRT  
 <213> Homo sapiens

<400> 208  
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 Pro Ile Ile Lys Phe Pro Gly Asp Val Ala Pro Lys Thr Asp Lys Glu  
 35 40 45  
 Leu Ala Val Gln Tyr Leu Asn Thr Phe Tyr Gly Cys Pro Lys Glu Ser  
 50 55 60  
 Cys Asn Leu Phe Val Leu Lys Asp Thr Leu Lys Lys Met Gln Lys Phe  
 65 70 75 80  
 Phe Gly Leu Pro Gln Thr Gly Asp Leu Asp Gln Asn Thr Ile Glu Thr  
 85 90 95  
 Met Arg Lys Pro Arg Cys Gly Asn Pro Asp Val Ala Asn Tyr Asn Phe  
 100 105 110  
 Phe Pro Arg Lys Pro Lys Trp Asp Lys Asn Gln Ile Thr Tyr Arg Ile  
 115 120 125  
 Ile Gly Tyr Thr Pro Asp Leu Asp Pro Glu Thr Val Asp Asp Ala Phe  
 130 135 140  
 Ala Arg Ala Phe Gln Val Trp Ser Asp Val Thr Pro Leu Arg Phe Ser  
 145 150 155 160  
 Arg Ile His Asp Gly Glu Ala Asp Ile Met Ile Asn Phe Gly Arg Trp  
 165 170 175  
 Glu His Gly Asp Gly Tyr Pro Phe Asp Gly Lys Asp Gly Leu Leu Ala  
 180 185 190  
 His Ala Phe Ala Pro Gly Thr Gly Val Gly Gly Asp Ser His Phe Asp  
 195 200 205  
 Asp Asp Glu Leu Trp Thr Leu Gly Glu Gly Gln Val Val Arg Val Lys  
 210 215 220  
 Tyr Gly Asn Ala Asp Gly Glu Tyr Cys Lys Phe Pro Phe Leu Phe Asn  
 225 230 235 240  
 Gly Lys Glu Tyr Asn Ser Cys Thr Asp Thr Gly Arg Ser Asp Gly Phe  
 245 250 255  
 Leu Trp Cys Ser Thr Thr Tyr Asn Phe Glu Lys Asp Gly Lys Tyr Gly  
 260 265 270  
 Phe Cys Pro His Glu Ala Leu Phe Thr Met Gly Gly Asn Ala Glu Gly  
 275 280 285  
 Gln Pro Cys Lys Phe Pro Phe Arg Phe Gln Gly Thr Ser Tyr Asp Ser  
 290 295 300  
 Cys Thr Thr Glu Gly Arg Thr Asp Gly Tyr Arg Trp Cys Gly Thr Thr  
 305 310 315 320  
 Glu Asp Tyr Asp Arg Asp Lys Lys Tyr Gly Phe Cys Pro Glu Thr Ala  
 325 330 335  
 Met Ser Thr Val Gly Gly Asn Ser Glu Gly Ala Pro Cys Val Phe Pro  
 340 345 350  
 Phe Thr Phe Leu Gly Asn Lys Tyr Glu Ser Cys Thr Ser Ala Gly Arg

355	360	365
Ser Asp Gly Lys Met Trp Cys Ala Thr Thr Ala Asn Tyr Asp Asp Asp		
370	375	380
Arg Lys Trp Gly Phe Cys Pro Asp Gln Gly Tyr Ser Leu Phe Leu Val		
385	390	395
Ala Ala His Glu Phe Gly His Ala Met Gly Leu Glu His Ser Gln Asp		
405	410	415
Pro Gly Ala Leu Met Ala Pro Ile Tyr Thr Tyr Thr Lys Asn Phe Arg		
420	425	430
Leu Ser Gln Asp Asp Ile Lys Gly Ile Gln Glu Leu Tyr Gly Ala Ser		
435	440	445
Pro Asp Ile Asp Leu Gly Thr Gly Pro Thr Pro Thr Leu Gly Pro Val		
450	455	460
Thr Pro Glu Ile Cys Lys Gln Asp Ile Val Phe Asp Gly Ile Ala Gln		
465	470	475
Ile Arg Gly Glu Ile Phe Phe Lys Asp Arg Phe Ile Trp Arg Thr		
485	490	495
Val Thr Pro Arg Asp Lys Pro Met Gly Pro Leu Leu Val Ala Thr Phe		
500	505	510
Trp Pro Glu Leu Pro Glu Lys Ile Asp Ala Val Tyr Glu Ala Pro Gln		
515	520	525
Glu Glu Lys Ala Val Phe Phe Ala Gly Asn Glu Tyr Trp Ile Tyr Ser		
530	535	540
Ala Ser Thr Leu Glu Arg Gly Tyr Pro Lys Pro Leu Thr Ser Leu Gly		
545	550	555
Leu Pro Pro Asp Val Gln Arg Val Asp Ala Ala Phe Asn Trp Ser Lys		
565	570	575
Asn Lys Lys Thr Tyr Ile Phe Ala Gly Asp Lys Phe Trp Arg Tyr Asn		
580	585	590
Glu Val Lys Lys Met Asp Pro Gly Phe Pro Lys Leu Ile Ala Asp		
595	600	605
Ala Trp Asn Ala Ile Pro Asp Asn Leu Asp Ala Val Val Asp Leu Gln		
610	615	620
Gly Gly Gly His Ser Tyr Phe Phe Lys Gly Ala Tyr Tyr Leu Lys Leu		
625	630	635
Glu Asn Gln Ser Leu Lys Ser Val Lys Phe Gly Ser Ile Lys Ser Asp		
645	650	655
Trp Leu Gly Cys		
660		

<210> 209  
 <211> 4160  
 <212> DNA  
 <213> Homo sapiens

<400> 209

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ccgacggacc atcgacgtg ggccaagagg gcccagctgag ccagatggcc aggccgctgt	180
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tccttgaagg gcccagcagc cgtcagacc ccgtccggat tcgccttc tcccacccca	540
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cctggccctg gtctttcttc catagctgtc cagggctgcc agccctgagc aaccagctcg	660
ccatcctggg aagagtgcgc agccctgtcc tccccgggtgt ctcccttcct gcttacccca	720
tcccagccct ccgaaccgct ccccttcgca gagccacagg catcatcctg ccagcccgaa	780
ggaatgtgtct gcccagtcga gggcatctt ccacccggag ggcccgcccc ctagagaggc	840
cagcgacccc tggcctgtc gccccagca gcaggcgtgc caggagcagc cacatcgctc	900

ccctcctgca	gtttccctcc	ccaacacccc	ctggccttac	agggtcggt	gcttacgtgg	960
ctgtccccac	ccccaaactca	tcctccccag	ggccagctgg	gaggccagcg	ggagccatgc	1020
tctaccactc	ctgggtctct	gaaaatcaactg	aaatcggggc	tttcttagct	gcccccttcac	1080
caccccgccc	caaggaaataa	ggaagggtct	tttaccagga	gcccaaaaaaa	gggcactgccc	1140
tttctgttt	tgcttcgtgg	actggctcat	atgtgaaggc	acgttctcca	gccatcagag	1200
gccccctcct	cctccaaaccc	atctctccct	ctcaactgtta	tccagctta	tccacccaggc	1260
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 <212> PRT  
 <213> Homo sapiens

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 Gly Ile Ile Glu Lys Arg Arg Asp Arg Ile Asn Ser Ser Leu Ser  
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 Ala Val Asp Phe Arg Ser Ile Gly Phe Arg Glu Cys Leu Thr Glu Val  
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 Ile Arg Tyr Leu Gly Val Leu Glu Gly Pro Ser Ser Arg Ala Asp Pro  
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 Val Arg Ile Arg Leu Leu Ser His Leu Asn Ser Tyr Ala Ala Glu Met  
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 Glu Pro Ser Pro Thr Pro Thr Gly Pro Leu Ala Phe Pro Ala Trp Pro  
 165 170 175  
 Trp Ser Phe Phe His Ser Cys Pro Gly Leu Pro Ala Leu Ser Asn Gln  
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 225 230 235 240  
 Gly Ala Ser Ser Thr Arg Arg Ala Arg Pro Leu Glu Arg Pro Ala Thr  
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 Pro Val Pro Val Ala Pro Ser Ser Arg Ala Ala Arg Ser Ser His Ile  
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<400> 211

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<400> 212  
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 65 70 75 80  
 Thr Leu Leu Leu Ser Asn Asn Lys Ile Thr Gly Leu Arg Asn Gly Ser  
 85 90 95  
 Phe Leu Gly Leu Ser Leu Leu Glu Lys Leu Asp Leu Arg Asn Asn Ile  
 100 105 110  
 Ile Ser Thr Val Gln Pro Gly Ala Phe Leu Gly Leu Gly Glu Leu Lys  
 115 120 125  
 Arg Leu Asp Leu Ser Asn Asn Arg Ile Gly Cys Leu Thr Ser Glu Thr  
 130 135 140  
 Phe Gln Gly Leu Pro Arg Leu Leu Arg Leu Asn Ile Ser Gly Asn Ile  
 145 150 155 160  
 Phe Ser Ser Leu Gln Pro Gly Val Phe Asp Glu Leu Pro Ala Leu Lys  
 165 170 175  
 Val Val Asp Leu Gly Thr Glu Phe Leu Thr Cys Asp Cys His Leu Arg  
 180 185 190  
 Trp Leu Leu Pro Trp Ala Gln Asn Arg Ser Leu Gln Leu Ser Glu His  
 195 200 205  
 Thr Leu Cys Ala Tyr Pro Ser Ala Leu His Ala Gln Ala Leu Gly Ser  
 210 215 220  
 Leu Gln Glu Ala Gln Leu Cys Cys Glu Gly Ala Leu Glu Leu His Thr

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Leu Pro Phe Gln Cys Ser Ala Ser Tyr	Leu Gly Asn Asp Thr Arg Ile		
260	265	270	
Arg Trp Tyr His Asn Arg Ala Pro Val	Glu Gly Asp Glu Gln Ala Gly		
275	280	285	
Ile Leu Leu Ala Glu Ser Leu Ile His Asp Cys	Thr Phe Ile Thr Ser		
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Glu Leu Thr Leu Ser His Ile Gly Val Trp	Ala Ser Gly Glu Trp Glu		
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Cys Thr Val Ser Met Ala Gln Gly Asn Ala Ser Lys	Lys Val Glu Ile		
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Val Val Leu Glu Thr Ser Ala Ser Tyr	Cys Pro Ala Glu Arg Val Ala		
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Asn Asn Arg Gly Asp Phe Arg Trp	Pro Arg Thr Leu Ala Gly Ile Thr		
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Ala Tyr Gln Ser Cys Leu Gln Tyr Pro Phe Thr	Ser Val Pro Leu Gly		
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Gly Gly Ala Pro Gly Thr Arg Ala Ser Arg	Arg Cys Asp Arg Ala Gly		
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Arg Trp Glu Pro Gly Asp Tyr Ser His Cys	Leu Tyr Thr Asn Asp Ile		
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Thr Arg Val Leu Tyr Thr Phe Val	Leu Met Pro Ile Asn Ala Ser Asn		
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Lys Phe Leu Gly Tyr Val Asp Gln Ile Lys	Glu Leu Val Glu Val Met		
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Glu Arg Ile Gly Gly Ala Ala Leu Ser Pro His	Ala Gln His Ile Ser		
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675	680	685	
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 Gln Glu Gly Asp Pro Ala Leu Pro Thr Pro Ser Pro Met Leu Arg Phe  
 865 870 875 880  
 Tyr Leu Ile Ala Gly Gly Ile Pro Leu Ile Ile Cys Gly Ile Thr Ala  
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 Ala Val Asn Ile His Asn Tyr Arg Asp His Ser Pro Tyr Cys Trp Leu  
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 Val Trp Arg Pro Ser Leu Gly Ala Phe Tyr Ile Pro Val Ala Leu Ile  
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 Val Gly Thr Pro Gly Pro Pro Glu Asp Gly Asp Ser Leu Tyr Ser Pro  
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Asn Ser Pro Thr Asp Ser Tyr Leu Gly Ser Ser Arg Asn Ser Pro Gly		
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Ala Gly Leu Gln Leu Glu Gly Glu Pro Met Leu Thr Pro Ser Glu Gly		
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Ser Asp Thr Ser Ala Ala Pro Leu Ser Glu Ala Gly Arg Ala Gly Gln		
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Arg Arg Ser Ala Ser Arg Asp Ser Leu Lys Gly Gly Gly Ala Leu Glu		
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Lys Glu Ser His Arg Arg Ser Tyr Pro Leu Asn Ala Ala Ser Leu Asn		
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Gly Ala Pro Lys Gly Gly Lys Tyr Asp Asp Val Thr Leu Met Gly Ala		
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<212> DNA  
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<220>  
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 <212> PRT  
 <213> Homo sapiens

<400> 214

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35 40 45  
Pro Pro Gly Arg Asp Gly Glu Asp Gly Pro Thr Gly Pro Pro Gly Pro  
50 55 60  
Pro Gly Pro Pro Gly Pro Pro Gly Leu Gly Gly Asn Phe Ala Ala Gln  
65 70 75 80  
Tyr Asp Gly Lys Gly Val Gly Leu Gly Pro Gly Pro Met Gly Leu Met  
85 90 95  
Gly Pro Arg Gly Pro Pro Gly Ala Ala Gly Ala Pro Gly Pro Gln Gly  
100 105 110  
Phe Gln Gly Pro Ala Gly Glu Pro Gly Glu Pro Gly Gln Thr Gly Pro  
115 120 125  
Ala Gly Ala Arg Gly Pro Ala Gly Pro Pro Gly Lys Ala Gly Glu Asp  
130 135 140  
Gly His Pro Gly Lys Pro Gly Arg Pro Gly Glu Arg Gly Val Val Gly  
145 150 155 160  
Pro Gln Gly Ala Arg Gly Phe Pro Gly Thr Pro Gly Leu Pro Gly Phe  
165 170 175  
Lys Gly Ile Arg Gly His Asn Gly Leu Asp Gly Leu Lys Gly Gln Pro  
180 185 190  
Gly Ala Pro Gly Val Lys Gly Glu Pro Gly Ala Pro Gly Glu Asn Gly  
195 200 205  
Thr Pro Gly Gln Thr Gly Ala Arg Gly Leu Pro Gly Glu Arg Gly Arg  
210 215 220  
Val Gly Ala Pro Gly Pro Ala Gly Ala Arg Gly Ser Asp Gly Ser Val  
225 230 235 240  
Gly Pro Val Gly Pro Ala Gly Pro Ile Gly Ser Ala Gly Pro Pro Gly  
245 250 255  
Phe Pro Gly Ala Pro Gly Pro Lys Gly Glu Ile Gly Ala Val Gly Asn  
260 265 270  
Ala Gly Pro Ala Gly Pro Ala Gly Pro Arg Gly Glu Val Gly Leu Pro  
275 280 285  
Gly Leu Ser Gly Pro Val Gly Pro Pro Gly Asn Pro Gly Ala Asn Gly  
290 295 300  
Leu Thr Gly Ala Lys Gly Ala Ala Gly Leu Pro Gly Val Ala Gly Ala  
305 310 315 320  
Pro Gly Leu Pro Gly Pro Arg Gly Ile Pro Gly Pro Val Gly Ala Ala  
325 330 335  
Gly Ala Thr Gly Ala Arg Gly Leu Val Gly Glu Pro Gly Pro Ala Gly  
340 345 350  
Ser Lys Gly Glu Ser Gly Asn Lys Gly Glu Pro Gly Ser Ala Gly Pro  
355 360 365  
Gln Gly Pro Pro Gly Pro Ser Gly Glu Glu Gly Lys Arg Gly Pro Asn  
370 375 380  
Gly Glu Ala Gly Ser Ala Gly Pro Pro Gly Pro Pro Gly Leu Arg Gly  
385 390 395 400  
Ser Pro Gly Ser Arg Gly Leu Pro Gly Ala Asp Gly Arg Ala Gly Val  
405 410 415  
Met Gly Pro Pro Gly Ser Arg Gly Ala Ser Gly Pro Ala Gly Val Arg  
420 425 430  
Gly Pro Asn Gly Asp Ala Gly Arg Pro Gly Glu Pro Gly Leu Met Gly  
435 440 445  
Pro Arg Gly Leu Pro Gly Ser Pro Gly Asn Ile Gly Pro Ala Gly Lys  
450 455 460  
Glu Gly Pro Val Gly Leu Pro Gly Ile Asp Gly Arg Pro Gly Pro Ile  
465 470 475 480

Gly Pro Ala Gly Ala Arg Gly Glu Pro Gly Asn Ile Gly Phe Pro Gly  
 485 490 495  
 Pro Lys Gly Pro Thr Gly Asp Pro Gly Lys Asn Gly Asp Lys Gly His  
 500 505 510  
 Ala Gly Leu Ala Gly Ala Arg Gly Ala Pro Gly Pro Asp Gly Asn Asn  
 515 520 525  
 Gly Ala Gln Gly Pro Pro Gly Pro Gln Gly Val Gln Gly Gly Lys Gly  
 530 535 540  
 Glu Gln Gly Pro Ala Gly Pro Pro Gly Phe Gln Gly Leu Pro Gly Pro  
 545 550 555 560  
 Ser Gly Pro Ala Gly Glu Val Gly Lys Pro Gly Glu Arg Gly Leu His  
 565 570 575  
 Gly Glu Phe Gly Leu Pro Gly Pro Ala Gly Pro Arg Gly Glu Arg Gly  
 580 585 590  
 Pro Pro Gly Glu Ser Gly Ala Ala Gly Pro Thr Gly Pro Ile Gly Ser  
 595 600 605  
 Arg Gly Pro Ser Gly Pro Pro Gly Pro Asp Gly Asn Lys Gly Glu Pro  
 610 615 620  
 Gly Val Val Gly Ala Val Gly Thr Ala Gly Pro Ser Gly Pro Ser Gly  
 625 630 635 640  
 Leu Pro Gly Glu Arg Gly Ala Ala Gly Ile Pro Gly Gly Lys Gly Glu  
 645 650 655  
 Lys Gly Glu Pro Gly Leu Arg Gly Glu Ile Gly Asn Pro Gly Arg Asp  
 660 665 670  
 Gly Ala Arg Gly Ala His Gly Ala Val Gly Ala Pro Gly Pro Ala Gly  
 675 680 685  
 Ala Thr Gly Asp Arg Gly Glu Ala Gly Ala Ala Gly Pro Ala Gly Pro  
 690 695 700  
 Ala Gly Pro Arg Gly Ser Pro Gly Glu Arg Gly Glu Val Gly Pro Ala  
 705 710 715 720  
 Gly Pro Asn Gly Phe Ala Gly Pro Ala Gly Ala Ala Gly Gln Pro Gly  
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 Ala Lys Gly Glu Arg Gly Ala Lys Gly Pro Lys Gly Glu Asn Gly Val  
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 Val Gly Pro Thr Gly Pro Val Gly Ala Ala Gly Pro Ala Gly Pro Asn  
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 Gly Pro Pro Gly Pro Ala Gly Ser Arg Gly Asp Gly Gly Pro Pro Gly  
 770 775 780  
 Met Thr Gly Phe Pro Gly Ala Ala Gly Arg Thr Gly Pro Pro Gly Pro  
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 Ser Gly Ile Ser Gly Pro Pro Gly Pro Pro Gly Pro Ala Gly Lys Glu  
 805 810 815  
 Gly Leu Arg Gly Pro Arg Gly Asp Gln Gly Pro Val Gly Arg Thr Gly  
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 Glu Val Gly Ala Val Gly Pro Pro Gly Phe Ala Gly Glu Lys Gly Pro  
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 Ser Gly Glu Ala Gly Thr Ala Gly Pro Pro Gly Thr Pro Gly Pro Gln  
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 Gly Leu Leu Gly Ala Pro Gly Ile Leu Gly Leu Pro Gly Ser Arg Gly  
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 930 935 940  
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Val Gly Pro Arg Gly Pro Ser Gly Pro Gln Gly Ile Arg Gly Asp Lys		
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Gly Glu Pro Gly Glu Lys Gly Pro Arg Gly Leu Pro Gly Leu Lys Gly		
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His Asn Gly Leu Gln Gly Leu Pro Gly Ile Ala Gly His His Gly Asp		
1025	1030	1035
Gln Gly Ala Pro Gly Ser Val Gly Pro Ala Gly Pro Arg Gly Pro Ala		
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Gly Pro Ser Gly Pro Ala Gly Lys Asp Gly Arg Thr Gly His Pro Gly		
1060	1065	1070
Thr Val Gly Pro Ala Gly Ile Arg Gly Pro Gln Gly His Gln Gly Pro		
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Ala Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Val Ser		
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Gly Gly Gly Tyr Asp Phe Gly Tyr Asp Gly Asp Phe Tyr Arg Ala Asp		
1105	1110	1115
Gln Pro Arg Ser Ala Pro Ser Leu Arg Pro Lys Asp Tyr Glu Val Asp		
1125	1130	1135
Ala Thr Leu Lys Ser Leu Asn Asn Gln Ile Glu Thr Leu Leu Thr Pro		
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Glu Gly Ser Arg Lys Asn Pro Ala Arg Thr Cys Arg Asp Leu Arg Leu		
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Ser His Pro Glu Trp Ser Ser Gly Tyr Tyr Trp Ile Asp Pro Asn Gln		
1170	1175	1180
Gly Cys Thr Met Asp Ala Ile Lys Val Tyr Cys Asp Phe Ser Thr Gly		
1185	1190	1195
Glu Thr Cys Ile Arg Ala Gln Pro Glu Asn Ile Pro Ala Lys Asn Trp		
1205	1210	1215
Tyr Arg Ser Ser Lys Asp Lys Lys His Val Trp Leu Gly Glu Thr Ile		
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Asn Ala Gly Ser Gln Phe Glu Tyr Asn Val Glu Gly Val Thr Ser Lys		
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Glu Met Ala Thr Gln Leu Ala Phe Met Arg Leu Leu Ala Asn Tyr Ala		
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Ser Gln Asn Ile Thr Tyr His Cys Lys Asn Ser Ile Ala Tyr Met Asp		
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Glu Glu Thr Gly Asn Leu Lys Lys Ala Val Ile Leu Gln Gly Ser Asn		
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Leu Val Asp Gly Cys Ser Lys Lys Thr Asn Glu Trp Gly Lys Thr Ile		
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Ile Glu Tyr Lys Thr Asn Lys Pro Ser Arg Leu Pro Phe Leu Asp Ile		
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Gly Pro Val Cys Phe Lys		
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<400> 215

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<210> 216

<211> 1247

<212> PRT

<213> Homo sapiens

<400> 216

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 Gly Gly Ala Asp Thr Tyr Ser Val Pro Ser Val Leu Ser Pro Arg Arg  
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Gln Asp Asp Leu Gly Leu Pro Asn Gly	Leu His Phe Asp Ala Phe	Ser
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<212> DNA  
<213> Homo sapiens

<400> 217

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Thr Ile Gly Glu Glu His Phe Gln Leu Val Arg Glu Phe Leu Tyr Asp  
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Val Gln Phe Asn Gly Asn Pro His Thr Glu Phe Leu Leu Asn Thr Tyr  
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Arg Thr Lys Gln Glu Val Leu Ser His Ile Ser Asn Met Ser Tyr Ile  
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Pro	Arg	Gly
Gly	Glu	Thr
2290	2295	2300
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Gly	Lys	Lys
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Pro	Lys	Gly
Gly	Asn	Pro
Gly	Phe	Gly
2320	2325	2330
Lys	Gly	Ile
Gly	Ile	Arg
Arg	Arg	Gly
Gly	Asn	Ser
Gly	Pro	Pro
2335	2340	2345
Gly	Gln	Lys
Lys	Gly	Gly
2355	2360	2365
Asn	Arg	Gly
Gly	Asp	Ser
Ile	Asp	Gln
Gly	Cys	Ala
2370	2375	2380

Asp Lys Cys Pro Cys Cys Tyr Gly Pro Leu Glu Cys Pro Val Phe Pro  
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 Thr Glu Leu Ala Phe Ala Leu Asp Thr Ser Glu Gly Val Asn Gln Asp  
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 Thr Phe Gly Arg Met Arg Asp Val Val Leu Ser Ile Val Asn Val Leu  
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 Thr Ile Ala Glu Ser Asn Cys Pro Thr Gly Ala Arg Val Ala Val Val  
 2435 2440 2445  
 Thr Tyr Asn Asn Glu Val Thr Thr Glu Ile Arg Phe Ala Asp Ser Lys  
 2450 2455 2460  
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 2755 2760 2765  
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 2770 2775 2780  
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 Leu Asn Glu Glu Pro Leu Met Arg Phe Gly Arg Leu Leu Pro Ser Phe  
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 Cys Asp Trp Phe Gln Gly Asp Gln Pro Thr Lys Asn Leu Val Lys Phe  
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 Gly His Lys Gln Val Asn Val Pro Asn Asn Val Thr Ser Ser Pro Thr  
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 Ser Asn Pro Val Thr Thr Lys Pro Val Thr Thr Lys Pro Val

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Thr	Thr	Lys	
Thr	Pro	Val	
Thr	Thr	Thr	
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Ile	Asn	Gln	
Pro	Ser	Val	
Lys	Pro	Ala	
Ala	Ala	Ala	
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Lys	Pro	Val	
Ala	Ala	Lys	
Pro	Val	Ala	
2915	2920	2925	
Pro	Pro	Ala	
Ala	Val	Lys	
Pro	Ala	Thr	
Ala	Ala	Lys	
2930	2935	2940	
Lys	Pro	Ala	
Ala	Ala	Val	
Arg	Pro	Pro	
Ala	Ala	Ala	
2945	2950	2955	2960
Thr	Lys	Pro	
Glu	Val	Pro	
Arg	Pro	Gln	
Ala	Ala	Lys	
Lys	Pro	Ala	
Ala	Thr	Thr	
Lys	Pro	Val	
Val	Val	Lys	
Met	Leu	Arg	
Glu	Val	Gln	
2980	2985	2990	
Val	Phe	Glu	
Ile	Thr	Glu	
Asn	Ser	Ala	
Lys	Leu	His	
Leu	His	Trp	
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Pro	Tyr	Phe	
Tyr	Asp	Leu	
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Ala	Thr	Val	
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Ile	Thr	Arg	
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Glu	Pro	Gly	
Pro	Tyr	Phe	
Tyr	Asp	Leu	
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Ala	Thr	Val	
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Leu	Asn	Leu	
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Ile	Gly	Gly	
Gly	Leu	Leu	
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Arg	Ser	Gln	
Gly	Leu	Val	
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Asp	Ala	Thr	
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Asn	Leu	Tyr	
Leu	Asn	His	
2995	3000	3005	
Leu	Asn	Gly	
Asn	Leu	Leu	
Leu	Leu	Asn	
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Ser	Thr	Ile	
Asn	Asn	Leu	
Leu	Met	Val	
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Ser	Thr	Glu	
Pro	Pro	Pro	
Gly	Pro	Gly	
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Asp	Pro	Pro	
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Asn	Ala	Arg	
Leu	Asn	Ser	
3110	3115	3120	
Trp	Trp	Tyr	
Tyr	Tyr	Asp	
3125	3130	3135	
Asp	Pro	Asn	
3130	3135		
Asn	Thr	Lys	
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Ser	Cys	Gly	
Gly	Cys	Gly	
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Glu	Cys	Gly	
Cys	Val	Asn	
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Ala	Pro	Val	
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Pro	Gly	Gly	
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 <212> DNA  
 <213> Homo sapiens

<400> 219

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<212> PRT  
<213> *Homo sapiens*

<400> 220

<210> 221  
 <211> 736  
 <212> DNA  
 <213> Homo sapiens

<400> 221

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agtgggtaca	gcgtgccctt	cacttcgcca	tcagcgagta	caacaaggcc	accgaagatg	240
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 <211> 594  
 <212> DNA  
 <213> Homo sapiens

<400> 222

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gtgcttttc	gagatctacg	aagtccctg	ggagaacaga	aggtccctgg	tgaaatccag	480
gtgtcaagaa	tcctaggat	ctgtgccagg	ccattcgcac	cagccaccac	ccactccac	540
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<210> 223  
 <211> 141  
 <212> PRT  
 <213> Homo sapiens

<400> 223

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				20			25				30				
Gly	Ile	Tyr	Asp	Ala	Asp	Leu	Asn	Asp	Glu	Trp	Val	Gln	Arg	Ala	Leu
				35			40				45				
His	Phe	Ala	Ile	Ser	Glu	Tyr	Asn	Lys	Ala	Thr	Glu	Asp	Glu	Tyr	Tyr
	50				55			60							
Arg	Arg	Pro	Leu	Gln	Val	Leu	Arg	Ala	Arg	Glu	Gln	Thr	Phe	Gly	Gly
	65				70			75			80				
Val	Asn	Tyr	Phe	Phe	Asp	Val	Glu	Val	Gly	Arg	Thr	Ile	Cys	Thr	Lys
					85			90			95				
Ser	Gln	Pro	Asn	Leu	Asp	Thr	Cys	Ala	Phe	His	Glu	Gln	Pro	Glu	Leu
				100			105			110					
Gln	Lys	Lys	Gln	Leu	Cys	Ser	Phe	Glu	Ile	Tyr	Glu	Val	Pro	Trp	Glu
	115				120			125							
Asp	Arg	Met	Ser	Leu	Val	Asn	Ser	Arg	Cys	Gln	Glu	Ala			

130

135

140

&lt;210&gt; 224

&lt;211&gt; 141

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 224

Met	Ala	Gln	His	Leu	Ser	Thr	Leu	Leu	Leu	Leu	Leu	Ala	Thr	Leu	Ala
1				5					10				15		
Val	Ala	Leu	Ala	Trp	Ser	Pro	Lys	Glu	Glu	Asp	Arg	Ile	Ile	Pro	Gly
				20				25					30		
Gly	Ile	Tyr	Asn	Ala	Asp	Leu	Asn	Asp	Glu	Trp	Val	Gln	Arg	Ala	Leu
	35					40						45			
His	Phe	Ala	Ile	Ser	Glu	Tyr	Asn	Lys	Ala	Thr	Lys	Asp	Asp	Tyr	Tyr
	50				55					60					
Arg	Arg	Pro	Leu	Arg	Val	Leu	Arg	Ala	Arg	Gln	Gln	Thr	Val	Gly	Gly
	65				70				75			80			
Val	Asn	Tyr	Phe	Phe	Asp	Val	Glu	Val	Gly	Arg	Thr	Ile	Cys	Thr	Lys
	85					90			95						
Ser	Gln	Pro	Asn	Leu	Asp	Thr	Cys	Ala	Phe	His	Glu	Gln	Pro	Glu	Leu
	100					105					110				
Gln	Lys	Lys	Gln	Leu	Cys	Ser	Phe	Glu	Ile	Tyr	Glu	Val	Pro	Trp	Glu
	115					120				125					
Asn	Arg	Arg	Ser	Leu	Val	Lys	Ser	Arg	Cys	Gln	Glu	Ser			
	130					135				140					

&lt;210&gt; 225

&lt;211&gt; 5460

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 225

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<212> DNA

<213> Homo sapiens

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<210> 228  
 <211> 1202  
 <212> PRT  
 <213> Homo sapiens

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				20				25				30			
Val	Phe	Gly	Lys	Glu	Asp	Leu	Ser	Lys	Asp	Asp	Arg	Phe	Pro	Asp	Tyr
				35				40			45				
Gly	Lys	Val	Glu	Leu	Val	Phe	Ser	Ala	Thr	Pro	Glu	Lys	Ile	Gln	Gly
				50				55			60				
Ser	Glu	His	Leu	Tyr	Asn	Asp	His	Gly	Val	Ile	Val	Asp	Tyr	Asn	Thr
				65				70			75			80	
Thr	Asp	Pro	Leu	Ile	Arg	Trp	Asp	Ser	Tyr	Glu	Asn	Leu	Ser	Ala	Asp
				85				90			95				
Gly	Glu	Val	Leu	His	Thr	Gln	Gly	Pro	Val	Asp	Gly	Ser	Leu	Tyr	Ala
				100				105			110				
Lys	Val	Arg	Lys	Lys	Ser	Ser	Ser	Asp	Pro	Gly	Ile	Pro	Gly	Gly	Pro
				115				120			125				
Gln	Ala	Ile	Pro	Ala	Thr	Asn	Ser	Pro	Asp	His	Ser	Asp	His	Thr	Leu
				130				135			140				
Ser	Val	Ser	Ser	Asp	Ser	Gly	His	Ser	Thr	Ala	Ser	Ala	Arg	Thr	Asp
				145				150			155			160	
Lys	Thr	Glu	Glu	Arg	Leu	Ala	Pro	Gly	Thr	Arg	Arg	Gly	Leu	Ser	Ala
				165				170			175				
Gln	Glu	Lys	Ala	Glu	Leu	Asp	Gln	Leu	Leu	Ser	Gly	Phe	Gly	Leu	Glu
				180				185			190				
Asp	Pro	Gly	Ser	Ser	Leu	Lys	Glu	Met	Thr	Asp	Ala	Arg	Ser	Lys	Tyr
				195				200			205				
Ser	Gly	Thr	Arg	His	Val	Val	Pro	Ala	Gln	Val	His	Val	Asn	Gly	Asp
				210				215			220				
Ala	Ala	Leu	Lys	Asp	Arg	Glu	Thr	Asp	Ile	Leu	Asp	Asp	Glu	Met	Pro
				225				230			235			240	
His	His	Asp	Leu	His	Ser	Val	Asp	Ser	Leu	Gly	Thr	Leu	Ser	Ser	Ser
				245				250			255				
Glu	Gly	Pro	Gln	Ser	Ala	His	Leu	Gly	Pro	Phe	Thr	Cys	His	Lys	Ser
				260				265			270				
Ser	Gln	Asn	Ser	Leu	Leu	Ser	Asp	Gly	Phe	Gly	Ser	Asn	Val	Gly	Glu
				275				280			285				
Asp	Pro	Gln	Gly	Thr	Leu	Val	Pro	Asp	Leu	Gly	Leu	Gly	Met	Asp	Gly
				290				295			300				
Pro	Tyr	Glu	Arg	Glu	Arg	Thr	Phe	Gly	Ser	Arg	Glu	Pro	Lys	Gln	Pro
				305				310			315			320	
Gln	Pro	Leu	Leu	Arg	Lys	Pro	Ser	Val	Ser	Ala	Gln	Met	Gln	Ala	Tyr
				325				330			335				

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 370 375 380  
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 385 390 395 400  
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 405 410 415  
 Ser Pro Ser Lys Ala Phe Lys Pro Arg Phe Pro Gly Asp Gln Val Val  
 420 425 430  
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 Thr Leu Asp Ile Asp Gln Ser Ile Glu Gln Leu Asn Arg Leu Ile Leu  
 450 455 460  
 Glu Leu Asp Pro Thr Phe Glu Pro Ile Pro Thr His Met Asn Ala Leu  
 465 470 475 480  
 Gly Ser Gln Ala Asn Gly Ser Val Ser Pro Asp Ser Val Gly Gly  
 485 490 495  
 Leu Arg Ala Ser Ser Arg Leu Pro Asp Thr Gly Glu Gly Pro Ser Arg  
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 Ala Thr Gly Arg Gln Gly Ser Ser Ala Glu Gln Pro Leu Gly Gly Arg  
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 Leu Arg Lys Leu Ser Leu Gly Gln Tyr Asp Asn Asp Ala Gly Gly Gln  
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 Pro Asn Leu Pro Pro Phe Pro Ser Pro Ala Asp Val Lys Glu Thr Met  
 565 570 575  
 Thr Pro Gly Tyr Pro Gln Asp Leu Asp Ile Ile Asp Gly Arg Ile Leu  
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 595 600 605  
 Glu Thr Pro Tyr Val Lys Thr Ala Leu Arg His Pro Pro Phe Ser Pro  
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 Pro Glu Pro Pro Leu Ser Ser Pro Ala Ser Gln His Lys Gly Gly Arg  
 625 630 635 640  
 Glu Pro Arg Ser Cys Pro Glu Thr Leu Thr His Ala Val Gly Met Ser  
 645 650 655  
 Glu Ser Pro Ile Gly Pro Lys Ser Thr Met Leu Arg Ala Asp Ala Ser  
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 Ser Thr Pro Ser Phe Gln Gln Ala Phe Ala Ser Ser Cys Thr Ile Ser  
 675 680 685  
 Ser Asn Gly Pro Gly Gln Arg Arg Glu Ser Ser Ser Ala Glu Arg  
 690 695 700  
 Gln Trp Val Glu Ser Ser Pro Lys Pro Met Val Ser Leu Leu Gly Ser  
 705 710 715 720  
 Gly Arg Pro Thr Gly Ser, Pro Leu Ser Ala Glu Phe Ser Gly Thr Arg  
 725 730 735  
 Lys Asp Ser Pro Val Leu Ser Cys Phe Pro Pro Ser Glu Leu Gln Ala  
 740 745 750  
 Pro Phe His Ser His Glu Leu Ser Leu Ala Glu Pro Pro Asp Ser Leu  
 755 760 765  
 Ala Pro Pro Ser Ser Gln Ala Phe Leu Gly Phe Gly Thr Ala Pro Val  
 770 775 780  
 Gly Ser Gly Leu Pro Pro Glu Glu Asp Leu Gly Ala Leu Leu Ala Asn  
 785 790 795 800  
 Ser His Gly Ala Ser Pro Thr Pro Ser Ile Pro Leu Thr Ala Thr Gly  
 805 810 815  
 Ala Ala Asp Asn Gly Phe Leu Ser His Asn Phe Leu Thr Val Ala Pro

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Gly His Ser Ser His His Ser Pro Gly	Leu Gln Gly Gln Gly Val Thr	
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Leu Pro Gly Gln Pro Pro Leu Pro Glu Lys Lys Arg Ala Ser Glu Gly		
850	855	860
Asp Arg Ser Leu Gly Ser Val Ser Pro Ser Ser Ser Gly Phe Ser Ser		
865	870	880
Pro His Ser Gly Ser Thr Ile Ser Ile Pro Phe Pro Asn Val Leu Pro		
885	890	895
Asp Phe Ser Lys Ala Ser Glu Ala Ala Ser Pro Leu Pro Asp Ser Pro		
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Gly Asp Lys Leu Val Ile Val Lys Phe Val Gln Asp Thr Ser Lys Phe		
915	920	925
Trp Tyr Lys Ala Asp Ile Ser Arg Glu Gln Ala Ile Ala Met Leu Lys		
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Asp Lys Glu Pro Gly Ser Phe Ile Val Arg Asp Ser His Ser Phe Arg		
945	950	960
Gly Ala Tyr Gly Leu Ala Met Lys Val Ala Thr Pro Pro Pro Ser Val		
965	970	975
Leu Gln Leu Asn Lys Lys Ala Gly Asp Leu Ala Asn Glu Leu Val Arg		
980	985	990
His Phe Leu Ile Glu Cys Thr Pro Lys Gly Val Arg Leu Lys Gly Cys		
995	1000	1005
Ser Asn Glu Pro Tyr Phe Gly Ser Leu Thr Ala Leu Val Cys Gln His		
1010	1015	1020
Ser Ile Thr Pro Leu Ala Leu Pro Cys Lys Leu Leu Ile Pro Glu Arg		
1025	1030	1040
Asp Pro Leu Glu Glu Ile Ala Glu Ser Ser Pro Gln Thr Ala Ala Asn		
1045	1050	1055
Ser Ala Ala Glu Leu Leu Lys Gln Gly Ala Ala Cys Asn Val Trp Tyr		
1060	1065	1070
Leu Asn Ser Val Glu Met Glu Ser Leu Thr Gly His Gln Ala Ile Gln		
1075	1080	1085
Lys Ala Leu Ser Ile Thr Leu Val Gln Glu Pro Pro Val Ser Thr		
1090	1095	1100
Val Val His Phe Lys Val Ser Ala Gln Gly Ile Thr Leu Thr Asp Asn		
1105	1110	1120
Gln Arg Lys Leu Phe Arg Arg His Tyr Pro Val Asn Ser Val Ile		
1125	1130	1135
Phe Cys Ala Leu Asp Pro Gln Asp Arg Lys Trp Ile Lys Asp Gly Pro		
1140	1145	1150
Ser Ser Lys Val Phe Gly Phe Val Ala Arg Lys Gln Gly Ser Ala Thr		
1155	1160	1165
Asp Asn Val Cys His Leu Phe Ala Glu His Asp Pro Glu Gln Pro Ala		
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Ser Ala Ile Val Asn Phe Val Ser Lys Val Met Ile Gly Ser Pro Lys		
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Lys Val		1200

<210> 229  
 <211> 2320  
 <212> DNA  
 <213> Homo sapiens

<400> 229

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gcatgtgtca	gagccggaca	ggaccctagct	gagccaggac	ctgggtgggg	gcaccctggc	300

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<210> 230  
 <211> 500  
 <212> PRT  
 <213> Homo sapiens

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					20			25				30			
Ser	Gly	Trp	Ala	Ala	Lys	Gly	Thr	Val	Arg	Gly	Trp	Asn	Arg	Arg	Ala
					35			40			45				
Arg	Glu	Ser	Pro	Gly	His	Val	Ser	Glu	Pro	Asp	Arg	Thr	Gln	Leu	Ser
					50			55			60				
Gln	Asp	Leu	Gly	Gly	Gly	Thr	Leu	Ala	Met	Asp	Thr	Leu	Pro	Asp	Asn
						65		70		75		80			
Arg	Thr	Arg	Val	Val	Glu	Asp	Asn	His	Ser	Tyr	Tyr	Val	Ser	Arg	Leu
						85		90				95			
Tyr	Gly	Pro	Ser	Glu	Pro	His	Ser	Arg	Glu	Leu	Trp	Val	Asp	Val	Ala
						100		105			110				
Glu	Ala	Asn	Arg	Ser	Gln	Val	Lys	Ile	His	Thr	Ile	Leu	Ser	Asn	Thr
						115		120			125				
His	Arg	Gln	Ala	Ser	Arg	Val	Val	Lle	Ser	Phe	Asp	Phe	Pro	Phe	Tyr
						130		135			140				
Gly	His	Pro	Leu	Arg	Gln	Ile	Thr	Ile	Ala	Thr	Gly	Gly	Phe	Ile	Phe
						145		150			155				160

Met Gly Asp Val Ile His Arg Met Leu Thr Ala Thr Gln Tyr Val Ala  
 165 170 175  
 Pro Leu Met Ala Asn Phe Asn Pro Gly Tyr Ser Asp Asn Ser Thr Val  
 180 185 190  
 Val Tyr Phe Asp Asn Gly Thr Val Phe Val Val Gln Trp Asp His Val  
 195 200 205  
 Tyr Leu Gln Gly Trp Glu Asp Lys Gly Ser Phe Thr Phe Gln Ala Ala  
 210 215 220  
 Leu His His Asp Gly Arg Ile Val Phe Ala Tyr Lys Glu Ile Pro Met  
 225 230 235 240  
 Ser Val Pro Glu Ile Ser Ser Gln His Pro Val Lys Thr Gly Leu  
 245 250 255  
 Ser Asp Ala Phe Met Ile Leu Asn Pro Ser Pro Asp Val Pro Glu Ser  
 260 265 270  
 Arg Arg Arg Ser Ile Phe Glu Tyr His Arg Ile Glu Leu Asp Pro Ser  
 275 280 285  
 Lys Val Thr Ser Met Ser Ala Val Glu Phe Thr Pro Leu Pro Thr Cys  
 290 295 300  
 Leu Gln His Arg Ser Cys Asp Ala Cys Met Ser Ser Asp Leu Thr Phe  
 305 310 315 320  
 Asn Cys Ser Trp Cys His Val Leu Gln Arg Cys Ser Ser Gly Phe Asp  
 325 330 335  
 Arg Tyr Arg Gln Glu Trp Met Asp Tyr Gly Cys Ala Gln Glu Ala Glu  
 340 345 350  
 Gly Arg Met Cys Glu Asp Phe Gln Asp Glu Asp His Asp Ser Ala Ser  
 355 360 365  
 Pro Asp Thr Ser Phe Ser Pro Tyr Asp Gly Asp Leu Thr Thr Thr Ser  
 370 375 380  
 Ser Ser Leu Phe Ile Asp Ser Leu Thr Thr Glu Asp Asp Thr Lys Leu  
 385 390 395 400  
 Asn Pro Tyr Ala Gly Gly Asp Gly Leu Gln Asn Asn Leu Ser Pro Lys  
 405 410 415  
 Thr Lys Gly Thr Pro Val His Leu Gly Thr Ile Val Gly Ile Val Leu  
 420 425 430  
 Ala Val Leu Val Ala Ala Ile Ile Leu Ala Gly Ile Tyr Ile Asn  
 435 440 445  
 Gly His Pro Thr Ser Asn Ala Ala Leu Phe Phe Ile Glu Arg Arg Pro  
 450 455 460  
 His His Trp Pro Ala Met Lys Phe Arg Ser His Pro Asp His Ser Thr  
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 Tyr Ala Glu Val Glu Pro Ser Gly His Glu Lys Glu Gly Phe Met Glu  
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<210> 231  
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 <212> DNA  
 <213> Homo sapiens

<400> 231

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<210> 232  
 <211> 564  
 <212> PRT  
 <213> Homo sapiens

<400> 232

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Glu	Asp	Gly	Gly	Pro	Ala	Cys	Tyr	Gly	Gly	Phe	Asp	Leu	Tyr	Phe	Ile
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Leu	Asp	Lys	Ser	Gly	Ser	Val	Leu	His	His	Trp	Asn	Glu	Ile	Tyr	Tyr
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Phe	Val	Glu	Gln	Leu	Ala	His	Lys	Phe	Ile	Ser	Pro	Gln	Leu	Arg	Met
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Ser	Phe	Ile	Val	Phe	Ser	Thr	Arg	Gly	Thr	Thr	Leu	Met	Lys	Leu	Thr
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Glu	Asp	Arg	Glu	Gln	Ile	Arg	Gln	Gly	Leu	Glu	Glu	Leu	Gln	Lys	Val
							100					105		110	
Leu	Pro	Gly	Gly	Asp	Thr	Tyr	Met	His	Glu	Gly	Phe	Glu	Arg	Ala	Ser
	115							120					125		
Glu	Gln	Ile	Tyr	Tyr	Glu	Asn	Arg	Gln	Gly	Tyr	Arg	Thr	Ala	Ser	Val
	130						135					140			
Ile	Ile	Ala	Leu	Thr	Asp	Gly	Glu	Leu	His	Glu	Asp	Leu	Phe	Phe	Tyr
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Ser	Glu	Arg	Glu	Ala	Asn	Arg	Ser	Arg	Asp	Leu	Gly	Ala	Ile	Val	Tyr
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Cys	Val	Gly	Val	Lys	Asp	Phe	Asn	Glu	Thr	Gln	Leu	Ala	Arg	Ile	Ala
							180					185		190	
Asp	Ser	Lys	Asp	His	Val	Phe	Pro	Val	Asn	Asp	Gly	Phe	Gln	Ala	Leu
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Gln	Gly	Ile	Ile	His	Ser	Ile	Leu	Lys	Lys	Ser	Cys	Ile	Glu	Ile	Leu
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Ala	Ala	Glu	Pro	Ser	Thr	Ile	Cys	Ala	Gly	Glu	Ser	Phe	Gln	Val	Val
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															240

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 Cys Ser Phe Lys Ile Asn Asp Ser Val Thr Leu Asn Glu Lys Pro Phe  
 260 265 270  
 Ser Val Glu Asp Thr Tyr Leu Leu Cys Pro Ala Pro Ile Leu Lys Glu  
 275 280 285  
 Val Gly Met Lys Ala Ala Leu Gln Val Ser Met Asn Asp Gly Leu Ser  
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 Phe Ile Ser Ser Ser Val Ile Ile Thr Thr His Cys Ser Asp Gly  
 305 310 315 320  
 Ser Ile Leu Ala Ile Ala Leu Leu Ile Leu Phe Leu Leu Leu Ala Leu  
 325 330 335  
 Ala Leu Leu Trp Trp Phe Trp Pro Leu Cys Cys Thr Val Ile Ile Lys  
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 Glu Val Pro Pro Pro Ala Glu Glu Ser Glu Glu Asp Asp Asp  
 355 360 365  
 Gly Leu Pro Lys Lys Trp Pro Thr Val Asp Ala Ser Tyr Tyr Gly  
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 Lys Gly Ser Thr Glu Glu Gly Ala Lys Leu Glu Lys Ala Lys Asn Ala  
 405 410 415  
 Arg Val Lys Met Pro Glu Gln Glu Tyr Glu Phe Pro Glu Pro Arg Asn  
 420 425 430  
 Leu Asn Asn Asn Met Arg Arg Pro Ser Ser Pro Arg Lys Trp Tyr Ser  
 435 440 445  
 Pro Ile Lys Gly Lys Leu Asp Ala Leu Trp Val Leu Leu Arg Lys Gly  
 450 455 460  
 Tyr Asp Arg Val Ser Val Met Arg Pro Gln Pro Gly Asp Thr Gly Arg  
 465 470 475 480  
 Cys Ile Asn Phe Thr Arg Val Lys Asn Asn Gln Pro Ala Lys Tyr Pro  
 485 490 495  
 Leu Asn Asn Ala Tyr His Thr Ser Ser Pro Pro Pro Ala Pro Ile Tyr  
 500 505 510  
 Thr Pro Pro Pro Pro Ala Pro His Cys Pro Pro Pro Pro Pro Ser Ala  
 515 520 525  
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 530 535 540  
 Gln Ala Pro Pro Pro Asn Arg Ala Pro Pro Pro Ser Arg Pro Pro Pro  
 545 550 555 560  
 Arg Pro Ser Val

<210> 233  
 <211> 5086  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(5086)  
 <223> n = A,T,C or G

<400> 233

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<210> 234  
 <211> 1366  
 <212> PRT  
 <213> Homo sapiens

<400> 234

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Gly	Pro	Ala	Gly	Asp	Arg	Gly	Pro	Arg	Gly	Glu	Arg	Gly	Pro	Pro	Gly
									35				40		45
Pro	Pro	Gly	Arg	Asp	Gly	Glu	Asp	Gly	Pro	Thr	Gly	Pro	Pro	Gly	Pro
									50				55		60
Pro	Gly	Pro	Pro	Gly	Pro	Pro	Gly	Leu	Gly	Gly	Asn	Phe	Ala	Ala	Gln
								65				70		75	80
Tyr	Asp	Gly	Lys	Gly	Val	Gly	Leu	Gly	Pro	Gly	Pro	Met	Gly	Leu	Met
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Gly	Pro	Arg	Gly	Pro	Pro	Gly	Ala	Ala	Gly	Ala	Pro	Gly	Pro	Gln	Gly
								100				105		110	
Phe	Gln	Gly	Pro	Ala	Gly	Glu	Pro	Gly	Glu	Pro	Gly	Gln	Thr	Gly	Pro
								115				120		125	
Ala	Gly	Ala	Arg	Gly	Pro	Ala	Gly	Pro	Pro	Gly	Lys	Ala	Gly	Glu	Asp
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Gly	His	Pro	Gly	Lys	Pro	Gly	Arg	Pro	Gly	Glu	Arg	Gly	Val	Val	Gly
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Pro	Gln	Gly	Ala	Arg	Gly	Phe	Pro	Gly	Thr	Pro	Gly	Leu	Pro	Gly	Phe
								165				170		175	
Lys	Gly	Ile	Arg	Gly	His	Asn	Gly	Leu	Asp	Gly	Leu	Lys	Gly	Gln	Pro
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Gly	Ala	Pro	Gly	Val	Lys	Gly	Glu	Pro	Gly	Ala	Pro	Gly	Glu	Asn	Gly
								195				200		205	
Thr	Pro	Gly	Gln	Thr	Gly	Ala	Arg	Gly	Leu	Pro	Gly	Glu	Arg	Gly	Arg
								210				215		220	
Val	Gly	Ala	Pro	Gly	Pro	Ala	Gly	Ala	Arg	Gly	Ser	Asp	Gly	Ser	Val
								225				230		235	240
Gly	Pro	Val	Gly	Pro	Ala	Gly	Pro	Ile	Gly	Ser	Ala	Gly	Pro	Pro	Gly
								245				250		255	
Phe	Pro	Gly	Ala	Pro	Gly	Pro	Lys	Gly	Glu	Ile	Gly	Ala	Val	Gly	Asn
								260				265		270	
Ala	Gly	Pro	Ala	Gly	Pro	Ala	Gly	Pro	Arg	Gly	Glu	Val	Gly	Leu	Pro

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Gly Leu Ser Gly Pro Val Gly	Pro Pro Gly Asn Pro	Gly Ala Asn Gly
290	295	300
Leu Thr Gly Ala Lys Gly	Ala Ala Gly Leu Pro	Gly Val Ala Gly Ala
305	310	315
320		
Pro Gly Leu Pro Gly	Pro Arg Gly Ile	Pro Val Gly Ala Ala
325	330	335
Gly Ala Thr Gly Ala Arg Gly	Leu Val Gly Glu Pro	Gly Pro Ala Gly
340	345	350
Ser Lys Gly Glu Ser Gly Asn Lys	Gly Glu Pro Gly Ser	Ala Gly Pro
355	360	365
Gln Gly Pro Pro Gly Pro Ser	Gly Glu Glu Gly Lys	Arg Gly Pro Asn
370	375	380
Gly Glu Ala Gly Ser Ala Gly	Pro Pro Gly Pro Pro	Gly Leu Arg Gly
385	390	395
400		
Ser Pro Gly Ser Arg Gly	Leu Pro Gly Ala Asp	Gly Arg Ala Gly Val
405	410	415
Met Gly Pro Pro Gly Ser Arg Gly	Ala Ser Gly Pro Ala	Gly Val Arg
420	425	430
Gly Pro Asn Gly Asp Ala Gly	Arg Pro Gly Glu Pro	Gly Leu Met Gly
435	440	445
Pro Arg Gly Leu Pro Gly Ser	Pro Gly Asn Ile	Gly Pro Ala Gly Lys
450	455	460
Glu Gly Pro Val Gly Leu Pro	Gly Ile Asp Gly Arg	Pro Gly Pro Ile
465	470	475
480		
Gly Pro Ala Gly Ala Arg Gly	Glu Pro Gly Asn Ile	Gly Phe Pro Gly
485	490	495
Pro Lys Gly Pro Thr Gly Asp	Pro Gly Lys Asn Gly	Asp Lys Gly His
500	505	510
Ala Gly Leu Ala Gly Ala Arg Gly	Ala Pro Gly Pro Asp	Gly Asn Asn
515	520	525
Gly Ala Gln Gly Pro Pro Gly	Pro Gln Gly Val	Gln Gly Gly Lys Gly
530	535	540
Glu Gln Gly Pro Ala Gly	Pro Pro Gly Phe	Gln Gly Leu Pro Gly Pro
545	550	555
560		
Ser Gly Pro Ala Gly Glu Val	Gly Lys Pro Gly Glu	Arg Gly Leu His
565	570	575
Gly Glu Phe Gly Leu Pro Gly	Pro Ala Gly Pro Arg	Gly Glu Arg Gly
580	585	590
Pro Pro Gly Glu Ser Gly	Ala Ala Gly Pro Thr	Gly Pro Ile Gly Ser
595	600	605
Arg Gly Pro Ser Gly Pro	Pro Gly Pro Asp	Gly Asn Lys Gly Glu Pro
610	615	620
Gly Val Val Gly Ala Val	Gly Thr Ala Gly Pro	Ser Gly Pro Ser Gly
625	630	635
640		
Leu Pro Gly Glu Arg Gly	Ala Ala Gly Ile	Pro Gly Gly Lys Gly Glu
645	650	655
Lys Gly Glu Pro Gly Leu Arg	Gly Glu Ile Gly Asn	Pro Gly Arg Asp
660	665	670
Gly Ala Arg Gly Ala His	Gly Ala Val Gly	Ala Pro Gly Pro Ala Gly
675	680	685
Ala Thr Gly Asp Arg Gly	Glu Ala Gly Ala	Gly Pro Ala Gly Pro
690	695	700
Ala Gly Pro Arg Gly Ser	Pro Gly Glu Arg	Gly Glu Val Gly Pro Ala
705	710	715
720		
Gly Pro Asn Gly Phe Ala	Gly Pro Ala Gly Ala	Gly Gln Pro Gly
725	730	735
Ala Lys Gly Glu Arg Gly	Ala Lys Gly Pro	Lys Gly Glu Asn Gly Val
740	745	750
Val Gly Pro Thr Gly Pro	Val Gly Ala Ala	Gly Pro Ala Gly Pro Asn
755	760	765

Gly Pro Pro Gly Pro Ala Gly Ser Arg Gly Asp Gly Gly Pro Pro Gly  
 770 775 780  
 Met Thr Gly Phe Pro Gly Ala Ala Gly Arg Thr Gly Pro Pro Gly Pro  
 785 790 795 800  
 Ser Gly Ile Ser Gly Pro Pro Gly Pro Pro Gly Pro Ala Gly Lys Glu  
 805 810 815  
 Gly Leu Arg Gly Pro Arg Gly Asp Gln Gly Pro Val Gly Arg Thr Gly  
 820 825 830  
 Glu Val Gly Ala Val Gly Pro Pro Gly Phe Ala Gly Glu Lys Gly Pro  
 835 840 845  
 Ser Gly Glu Ala Gly Thr Ala Gly Pro Pro Gly Thr Pro Gly Pro Gln  
 850 855 860  
 Gly Leu Leu Gly Ala Pro Gly Ile Leu Gly Leu Pro Gly Ser Arg Gly  
 865 870 875 880  
 Glu Arg Gly Leu Pro Gly Val Ala Gly Ala Val Gly Glu Pro Gly Pro  
 885 890 895  
 Leu Gly Ile Ala Gly Pro Pro Gly Ala Arg Gly Pro Pro Gly Ala Val  
 900 905 910  
 Gly Ser Pro Gly Val Asn Gly Ala Pro Gly Glu Ala Gly Arg Asp Gly  
 915 920 925  
 Asn Pro Gly Asn Asp Gly Pro Pro Gly Arg Asp Gly Gln Pro Gly His  
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<212> DNA

<213> Homo sapiens

<400> 235

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 <213> Homo sapiens

<400> 236

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Pro	Asp	Lys	Ala	Arg	Leu	Leu	Arg	Gln	Tyr	Asp	Asn	Glu	Lys	Lys	Trp
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Lys	Lys	Phe	Arg	Arg	Arg	Val	Gln	Glu	Ser	Thr	Lys	Val	Leu	Arg	Glu
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Leu	Glu	Ile	Ser	Leu	Arg	Thr	Asn	His	Ile	Gly	Trp	Val	Arg	Glu	Phe
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Phe	Ala	Gln	Cys	Ser	Val	Met	Phe	Asp	Phe	Glu	Gly	Leu	Glu	Ser	Gly
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Phe Asn Leu Val Met Ser His Pro His Ala Val Asn Glu Ile Ala Leu		240
245	250	255
Ser Leu Asn Asn Lys Asn Pro Arg Thr	Lys Ala Leu Val Leu Glu Leu	
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Lys Leu Met Glu Tyr Phe Arg Asn Glu Asp Ser Asn Ile Asp Phe Met		
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Val Ala Cys Met Gln Phe Ile Asn Ile Val Val His Ser Val Glu Asp		320
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Met Asn Phe Arg Val His Leu Gln Tyr Glu Phe Thr Lys Leu Gly Leu		
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Val Gln Ile Gln Ala Tyr Leu Asp Asn Val Phe Asp Val Gly Gly Leu		
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Val Asp Ser Glu Ala Leu Ala Arg Val Gly Pro Ala Glu Leu Ser Glu		480
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Leu Phe Lys Thr Lys Ala Gln Gly Pro Ala Leu Asp Leu Ile Cys Ser		
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Ser Ala Glu Glu Ile Cys Arg Ala Ile His Thr Phe Asp Leu Gln Thr		
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Cys Ala Val Leu Asp Leu Ala Ser Leu Gln Trp Val Ala Met Gln Cys		
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 <212> PRT  
 <213> Homo sapiens

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					20			25					30		
Glu	Glu	Asn	Phe	Arg	Ser	Asn	Leu	Arg	Glu	Val	Ala	Gln	Met	Leu	Lys
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Ser	Lys	His	Gly	Gly	Asn	Tyr	Leu	Leu	Phe	Asn	Leu	Ser	Glu	Arg	Arg
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Pro	Asp	Ile	Thr	Lys	Leu	His	Ala	Lys	Val	Leu	Glu	Phe	Gly	Trp	Pro
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Asp	Leu	His	Thr	Pro	Ala	Leu	Glu	Lys	Ile	Cys	Ser	Ile	Cys	Lys	Ala
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Met	Asp	Thr	Trp	Leu	Asn	Ala	Asp	Pro	His	Asn	Val	Val	Val	Leu	His
					100			105				110			
Asn	Lys	Gly	Asn	Arg	Gly	Arg	Ile	Gly	Val	Val	Ile	Ala	Ala	Tyr	Met
					115			120				125			
His	Tyr	Ser	Asn	Ile	Ser	Ala	Ser	Ala	Asp	Gln	Ala	Leu	Asp	Arg	Phe
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Ala	Met	Lys	Arg	Phe	Tyr	Glu	Asp	Lys	Ile	Val	Pro	Ile	Gly	Gln	Pro
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Ser	Gln	Arg	Arg	Tyr	Val	His	Tyr	Phe	Ser	Gly	Leu	Leu	Ser	Gly	Ser
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Ile	Lys	Ile	Asn	Asn	Lys	Pro	Leu	Phe	Leu	His	His	Val	Ile	Met	His
					180			185				190			
Gly	Ile	Pro	Asn	Phe	Glu	Ser	Lys	Gly	Gly	Cys	Arg	Pro	Phe	Leu	Arg
					195			200				205			

Ile Tyr Gln Ala Met Gln Pro Val Tyr Thr Ser Gly Ile Tyr Asn Ile  
 210 215 220  
 Pro Gly Asp Ser Gln Thr Ser Val Cys Ile Thr Ile Glu Pro Gly Leu  
 225 230 235 240  
 Leu Leu Lys Gly Asp Ile Leu Leu Lys Cys Tyr His Lys Lys Phe Arg  
 245 250 255  
 Ser Pro Ala Arg Asp Val Ile Phe Arg Val Gln Phe His Thr Cys Ala  
 260 265 270  
 Ile His Asp Leu Gly Val Val Phe Gly Lys Glu Asp Leu Asp Asp Ala  
 275 280 285  
 Phe Lys Asp Asp Arg Phe Pro Glu Tyr Gly Lys Val Glu Phe Val Phe  
 290 295 300  
 Ser Tyr Gly Pro Glu Lys Ile Gln Gly Met Glu His Leu Glu Asn Gly  
 305 310 315 320  
 Pro Ser Val Ser Val Asp Tyr Asn Thr Ser Asp Pro Leu Ile Arg Trp  
 325 330 335  
 Asp Ser Tyr Asp Asn Phe Ser Gly His Arg Asp Asp Gly Met Glu Glu  
 340 345 350  
 Val Val Gly His Thr Gln Gly Pro Leu Asp Gly Ser Leu Tyr Ala Lys  
 355 360 365  
 Val Lys Lys Lys Asp Ser Leu His Gly Ser Thr Gly Ala Val Asn Ala  
 370 375 380  
 Thr Arg Pro Thr Leu Ser Ala Thr Pro Asn His Val Glu His Thr Leu  
 385 390 395 400  
 Ser Val Ser Ser Asp Ser Gly Asn Ser Thr Ala Ser Thr Lys Thr Asp  
 405 410 415  
 Lys Thr Asp Glu Pro Val Pro Gly Ala Ser Ser Ala Thr Ala Ala Leu  
 420 425 430  
 Ser Pro Gln Glu Lys Arg Glu Leu Asp Arg Leu Leu Ser Gly Phe Gly  
 435 440 445  
 Leu Glu Arg Glu Lys Gln Gly Ala Met Tyr His Thr Gln His Leu Arg  
 450 455 460  
 Ser Arg Pro Ala Gly Gly Ser Ala Val Pro Ser Ser Gly Arg His Val  
 465 470 475 480  
 Val Pro Ala Gln Val His Val Asn Gly Gly Ala Leu Ala Ser Glu Arg  
 485 490 495  
 Glu Thr Asp Ile Leu Asp Asp Glu Leu Pro Asn Gln Asp Gly His Ser  
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 Ala Gly Ser Met Gly Thr Leu Ser Ser Leu Asp Gly Val Thr Asn Thr  
 515 520 525  
 Ser Glu Gly Gly Tyr Pro Glu Ala Leu Ser Pro Leu Thr Asn Gly Leu  
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 Asp Lys Ser Tyr Pro Met Glu Pro Met Val Asn Gly Gly Tyr Pro  
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 Tyr Glu Ser Ala Ser Arg Ala Gly Pro Ala His Ala Gly His Thr Ala  
 565 570 575  
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 580 585 590  
 Arg Glu Gly Pro His Pro Ala Trp Pro Gln Pro Val Thr Thr Ser His  
 595 600 605  
 Tyr Ala His Asp Pro Ser Gly Met Phe Arg Ser Gln Ser Phe Ser Glu  
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 Ala Glu Pro Gln Leu Pro Pro Ala Pro Val Arg Gly Gly Ser Ser Arg  
 625 630 635 640  
 Glu Ala Val Gln Arg Gly Leu Asn Ser Trp Gln Gln Gln Gln Gln  
 645 650 655  
 Gln Gln Gln Pro Arg Pro Pro Arg Gln Gln Glu Arg Ala His Leu  
 660 665 670  
 Glu Ser Leu Val Ala Ser Arg Pro Ser Pro Gln Pro Leu Ala Glu Thr  
 675 680 685  
 Pro Ile Pro Ser Leu Pro Glu Phe Pro Arg Ala Ala Ser Gln Gln Glu

690	695	700	
Ile Glu Gln Ser Ile Glu Thr Leu Asn Met	Leu Met Leu Asp Leu Glu		
705	710	715	720
Pro Ala Ser Ala Ala Ala Pro Leu His Lys	Ser Gln Ser Val Pro Gly		
725	730	735	
Ala Trp Pro Gly Ala Ser Pro Leu Ser Ser	Gln Pro Leu Ser Gly Ser		
740	745	750	
Ser Arg Gln Ser His Pro Leu Thr Gln Ser Arg Ser	Gly Tyr Ile Pro		
755	760	765	
Ser Gly His Ser Leu Gly Thr Pro Glu Pro Ala	Pro Arg Ala Ser Leu		
770	775	780	
Glu Ser Val Pro Pro Gly Arg Ser Tyr Ser	Pro Tyr Asp Tyr Gln Pro		
785	790	795	800
Cys Leu Ala Gly Pro Asn Gln Asp Phe His	Ser Lys Ser Pro Ala Ser		
805	810	815	
Ser Ser Leu Pro Ala Phe Leu Pro Thr Thr His	Ser Pro Pro Gly Pro		
820	825	830	
Gln Gln Pro Pro Ala Ser Leu Pro Gly Leu Thr	Ala Gln Pro Leu Leu		
835	840	845	
Ser Pro Lys Glu Ala Thr Ser Asp Pro Ser Arg	Thr Pro Glu Glu Glu		
850	855	860	
Pro Leu Asn Leu Glu Gly Leu Val Ala His Arg	Val Ala Gly Val Gln		
865	870	875	880
Ala Arg Glu Lys Gln Pro Ala Glu Pro Pro Ala	Pro Leu Arg Arg Arg		
885	890	895	
Ala Ala Ser Asp Gly Gln Tyr Glu Asn Gln Ser	Pro Glu Ala Thr Ser		
900	905	910	
Pro Arg Ser Pro Gly Val Arg Ser Pro Val Gln	Cys Val Ser Pro Glu		
915	920	925	
Leu Ala Leu Thr Ile Ala Leu Asn Pro Gly	Gly Arg Pro Lys Glu Pro		
930	935	940	
His Leu His Ser Tyr Lys Glu Ala Phe Glu	Glu Met Glu Gly Thr Ser		
945	950	955	960
Pro Ser Ser Pro Pro Ser Gly Val Arg Ser Pro	Pro Pro Gly Leu Ala		
965	970	975	
Lys Thr Pro Leu Ser Ala Leu Gly Leu Lys	Pro His Asn Pro Ala Asp		
980	985	990	
Ile Leu Leu His Pro Thr Gly Val Thr Arg Arg	Arg Ile Gln Pro Glu		
995	1000	1005	
Glu Asp Glu Gly Lys Val Val Val Arg Leu Ser	Glu Glu Pro Arg Ser		
1010	1015	1020	
Tyr Val Glu Ser Val Ala Arg Thr Ala Val	Ala Gly Pro Arg Ala Gln		
1025	1030	1035	1040
Asp Ser Glu Pro Lys Ser Phe Ser Ala Pro	Ala Thr Gln Ala Tyr Gly		
1045	1050	1055	
His Glu Ile Pro Leu Arg Asn Gly Thr Leu Gly	Gly Ser Phe Val Ser		
1060	1065	1070	
Pro Ser Pro Leu Ser Thr Ser Ser Pro Ile Leu	Ser Ala Asp Ser Thr		
1075	1080	1085	
Ser Val Gly Ser Phe Pro Ser Gly Glu Ser Ser	Asp Gln Gly Pro Arg		
1090	1095	1100	
Thr Pro Thr Gln Pro Leu Leu Glu Ser Gly	Phe Arg Ser Gly Ser Leu		
1105	1110	1115	1120
Gly Gln Pro Ser Pro Ser Ala Gln Arg Asn	Tyr Gln Ser Ser Ser Pro		
1125	1130	1135	
Leu Pro Thr Val Gly Ser Ser Tyr Ser Ser Pro	Asp Tyr Ser Leu Gln		
1140	1145	1150	
His Phe Ser Ser Ser Pro Glu Ser Gln Ala Arg	Ala Gln Phe Ser Val		
1155	1160	1165	
Ala Gly Val His Thr Val Pro Gly Ser Pro Gln	Ala Arg His Arg Thr		
1170	1175	1180	

Val Gly Thr Asn Thr Pro Pro Ser Pro Gly Phe Gly Arg Arg Ala Ile  
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 Asn Pro Ser Met Ala Ala Pro Ser Ser Pro Ser Leu Ser His His Gln  
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 Met Met Gly Pro Pro Gly Thr Gly Phe His Gly Ser Thr Val Ser Ser  
 1220 1225 1230  
 Pro Gln Ser Ser Ala Ala Thr Thr Pro Gly Ser Pro Ser Leu Cys Arg  
 1235 1240 1245  
 His Pro Ala Gly Val Tyr Gln Val Ser Gly Leu His Asn Lys Val Ala  
 1250 1255 1260  
 Thr Thr Pro Gly Ser Pro Ser Leu Gly Arg His Pro Gly Ala His Gln  
 1265 1270 1275 1280  
 Gly Asn Leu Ala Ser Gly Leu His Ser Asn Ala Ile Ala Ser Pro Gly  
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 Gly Ser Pro Cys Leu Asp Arg His Val Ala Tyr Gly Tyr Ser Thr  
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 1425 1430 1435 1440  
 Ser Met Pro Asp Asn Ser Pro Glu Thr Arg Ala Lys Val Lys Phe Val  
 1445 1450 1455  
 Gln Asp Thr Ser Lys Tyr Trp Tyr Lys Pro Glu Ile Ser Arg Glu Gln  
 1460 1465 1470  
 Ala Ile Ala Leu Leu Lys Asp Gln Glu Pro Gly Ala Phe Ile Ile Arg  
 1475 1480 1485  
 Asp Ser His Ser Phe Arg Gly Ala Tyr Gly Leu Ala Met Lys Val Ser  
 1490 1495 1500  
 Ser Pro Pro Pro Thr Ile Met Gln Gln Asn Lys Lys Gly Asp Met Thr  
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 His Glu Leu Val Arg His Phe Leu Ile Glu Thr Gly Pro Arg Gly Val  
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 1540 1545 1550  
 Leu Val Tyr Gln His Ser Ile Ile Pro Leu Ala Leu Pro Cys Lys Leu  
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 1570 1575 1580  
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 1620 1625 1630  
 Ala Ala Thr Ile Val His Phe Lys Val Ser Ala Gln Gly Ile Thr Leu  
 1635 1640 1645  
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 1650 1655 1660  
 Thr Val Thr Phe Cys Asp Leu Asp Pro Gln Glu Arg Lys Trp Met Lys

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Gln Gly Ser Thr Thr Cys His Leu Phe Ala Glu Leu Asp Pro Asn Gln			
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<400> 241

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Ala Glu Glu Asp Asp Ser Glu Pro Leu Asn Tyr Lys Asp Pro Cys Lys	
35 40 45	
Ala Ala Ala Phe Leu Gly Asp Ile Ala Leu Asp Glu Asp Leu Arg	
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Ala Phe Gln Val Gln Gln Ala Val Asp Leu Arg Arg His Thr Ala Arg	
65 70 75 80	
Lys Ser Ser Ile Lys Ala Ala Val Pro Gly Asn Thr Ser Thr Pro Ser	
85 90 95	
Cys Gln Ser Thr Asn Gly Gln Pro Gln Arg Gly Ala Cys Gly Arg Trp	
100 105 110	
Arg Gly Arg Ser Arg Ser Arg Arg Ala Ala Thr Ser Arg Pro Glu Arg	
115 120 125	
Val Trp Pro Asp Gly Val Ile Pro Phe Val Ile Gly Gly Asn Phe Thr	
130 135 140	
Gly Ser Gln Arg Ala Val Phe Arg Gln Ala Met Arg His Trp Glu Lys	
145 150 155 160	
His Thr Cys Val Thr Phe Leu Glu Arg Thr Asp Glu Asp Ser Tyr Ile	
165 170 175	
Val Phe Thr Tyr Arg Pro Cys Gly Cys Cys Ser Tyr Val Gly Arg Arg	
180 185 190	
Gly Gly Gly Pro Gln Ala Ile Ser Ile Gly Lys Asn Cys Asp Lys Phe	
195 200 205	
Gly Ile Val Val His Glu Leu Gly His Val Val Gly Phe Trp His Glu	
210 215 220	
His Thr Arg Pro Asp Arg Asp Arg His Val Ser Ile Val Arg Glu Asn	
225 230 235 240	
Ile Gln Pro Gly Gln Glu Tyr Asn Phe Leu Lys Met Glu Pro Gln Glu	
245 250 255	
Val Glu Ser Leu Gly Glu Thr Tyr Asp Phe Asp Ser Ile Met His Tyr	
260 265 270	
Ala Arg Asn Thr Phe Ser Arg Gly Ile Phe Leu Asp Thr Ile Val Pro	
275 280 285	
Lys Tyr Glu Val Asn Gly Val Lys Pro Pro Ile Gly Gln Arg Thr Arg	
290 295 300	
Leu Ser Lys Gly Asp Ile Ala Gln Ala Arg Lys Leu Tyr Lys Cys Pro	

305	310	315	320
Ala Cys Gly Glu Thr Leu Gln Asp Ser	Thr Gly Asn Phe Ser	Ser Pro	
325	330	335	
Glu Tyr Pro Asn Gly Tyr Ser Ala His Met	His Cys Val Trp Arg Ile		
340	345	350	
Ser Val Thr Pro Gly Glu Lys Ile Ile	Leu Asn Phe Thr Ser	Leu Asp	
355	360	365	
Leu Tyr Arg Ser Arg Leu Cys Trp Tyr Asp	Tyr Val Glu Val Arg Asp		
370	375	380	
Gly Phe Trp Arg Lys Ala Pro Leu Arg Gly	Arg Phe Cys Gly Ser Lys		
385	390	395	400
Leu Pro Glu Pro Ile Val Ser Thr Asp	Ser Arg Leu Trp Val Glu Phe		
405	410	415	
Arg Ser Ser Ser Asn Trp Val Gly Lys	Gly Phe Phe Ala Val Tyr Glu		
420	425	430	
Ala Ile Cys Gly Gly Asp Val Lys Lys	Asp Tyr Gly His Ile Gln Ser		
435	440	445	
Pro Asn Tyr Pro Asp Asp Tyr Arg Pro	Ser Lys Val Cys Ile Trp Arg		
450	455	460	
Ile Gln Val Ser Glu Gly Phe His Val	Gly Leu Thr Phe Gln Ser Phe		
465	470	475	480
Glu Ile Glu Arg His Asp Ser Cys Ala	Tyr Asp Tyr Leu Glu Val Arg		
485	490	495	
Asp Gly His Ser Glu Ser Ser Thr	Leu Ile Gly Arg Tyr Cys Gly Tyr		
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Glu Lys Pro Asp Asp Ile Lys Ser	Thr Ser Ser Arg Leu Trp Leu Lys		
515	520	525	
Phe Val Ser Asp Gly Ser Ile Asn Lys	Ala Gly Phe Ala Val Asn Phe		
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Phe Lys Glu Val Asp Glu Cys Ser	Arg Pro Asn Arg Gly Gly Cys Glu		
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Gln Arg Cys Leu Asn Thr Leu Gly Ser	Tyr Lys Cys Ser Cys Asp Pro		
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Gly Tyr Glu Leu Ala Pro Asp Lys	Arg Arg Cys Glu Ala Ala Cys Gly		
580	585	590	
Gly Phe Leu Thr Lys Leu Asn Gly Ser	Ile Thr Ser Pro Gly Trp Pro		
595	600	605	
Lys Glu Tyr Pro Pro Asn Lys Asn Cys	Ile Trp Gln Leu Val Ala Pro		
610	615	620	
Thr Gln Tyr Arg Ile Ser Leu Gln Phe	Asp Phe Glu Thr Glu Gly		
625	630	635	640
Asn Asp Val Cys Lys Tyr Asp Phe Val	Glu Val Arg Ser Gly Leu Thr		
645	650	655	
Ala Asp Ser Lys Leu His Gly Lys	Phe Cys Gly Ser Glu Lys Pro Glu		
660	665	670	
Val Ile Thr Ser Gln Tyr Asn Asn	Met Arg Val Glu Phe Lys Ser Asp		
675	680	685	
Asn Thr Val Ser Lys Lys Gly Phe	Lys Ala His Phe Phe Ser Asp Lys		
690	695	700	
Asp Glu Cys Ser Lys Asp Asn Gly	Gly Cys Gln Gln Asp Cys Val Asn		
705	710	715	720
Thr Phe Gly Ser Tyr Glu Cys Gln	Cys Arg Ser Gly Phe Val Leu His		
725	730	735	
Asp Asn Lys His Asp Cys Lys	Glu Ala Gly Cys Asp His Lys Val Thr		
740	745	750	
Ser Thr Ser Gly Thr Ile Thr Ser	Pro Asn Trp Pro Asp Lys Tyr Pro		
755	760	765	
Ser Lys Lys Glu Cys Thr Trp Ala Ile	Ser Ser Thr Pro Gly His Arg		
770	775	780	
Val Lys Leu Thr Phe Met Glu Met Asp	Ile Glu Ser Gln Pro Glu Cys		
785	790	795	800

Ala Tyr Asp His Leu Glu Val Phe Asp Gly Arg Asp Ala Lys Ala Pro  
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 Val Leu Gly Arg Phe Cys Gly Ser Lys Lys Pro Glu Pro Val Leu Ala  
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 Thr Gly Ser Arg Met Phe Leu Arg Phe Tyr Ser Asp Asn Ser Val Gln  
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 Arg Lys Gly Phe Gln Ala Ser His Ala Thr Glu Cys Gly Gly Gln Val  
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 Arg Ala Asp Val Lys Thr Lys Asp Leu Tyr Ser His Ala Gln Phe Gly  
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 Asp Asn Asn Tyr Pro Gly Gly Val Asp Cys Glu Trp Val Ile Val Ala  
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                      900                     905                     910  
 Glu Glu Thr Asp Cys Gly Tyr Asp Tyr Met Glu Leu Phe Asp Gly Tyr  
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 Asp Ser Thr Ala Pro Arg Leu Gly Arg Tyr Cys Gly Ser Gly Pro Pro  
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 Glu Glu Val Tyr Ser Ala Gly Asp Ser Val Leu Val Lys Phe His Ser  
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 Asp Asp Thr Ile Thr Lys Lys Gly Phe His Leu Arg Tyr Thr Ser Thr  
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 <212> DNA  
 <213> Homo sapiens

<400> 243

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 <211> 1523  
 <212> PRT  
 <213> Homo sapiens

<400> 244  
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 35 40 45  
 Gly Leu Gly Leu Arg Ala Val Pro Arg Gly Ile Pro Arg Asn Ala Glu  
 50 55 60  
 Arg Leu Asp Leu Asp Arg Asn Asn Ile Thr Arg Ile Thr Lys Met Asp  
 65 70 75 80  
 Phe Ala Gly Leu Lys Asn Leu Arg Val Leu His Leu Glu Asp Asn Gln  
 85 90 95  
 Val Ser Val Ile Glu Arg Gly Ala Phe Gln Asp Leu Lys Gln Leu Glu  
 100 105 110  
 Arg Leu Arg Leu Asn Lys Asn Lys Leu Gln Val Leu Pro Glu Leu Leu  
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 Phe Gln Ser Thr Pro Lys Leu Thr Arg Leu Asp Leu Ser Glu Asn Gln  
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 Ile Gln Gly Ile Pro Arg Lys Ala Phe Arg Gly Ile Thr Asp Val Lys  
 145 150 155 160  
 Asn Leu Gln Leu Asp Asn Asn His Ile Ser Cys Ile Glu Asp Gly Ala  
 165 170 175  
 Phe Arg Ala Leu Arg Asp Leu Glu Ile Leu Thr Leu Asn Asn Asn Asn  
 180 185 190  
 Ile Ser Arg Ile Leu Val Thr Ser Phe Asn His Met Pro Lys Ile Arg  
 195 200 205  
 Thr Leu Arg Leu His Ser Asn His Leu Tyr Cys Asp Cys His Leu Ala  
 210 215 220  
 Trp Leu Ser Asp Trp Leu Arg Gln Arg Arg Thr Val Gly Gln Phe Thr  
 225 230 235 240  
 Leu Cys Met Ala Pro Val His Leu Arg Gly Phe Asn Val Ala Asp Val  
 245 250 255  
 Gln Lys Lys Glu Tyr Val Cys Pro Ala Pro His Ser Glu Pro Pro Ser  
 260 265 270  
 Cys Asn Ala Asn Ser Ile Ser Cys Pro Ser Pro Cys Thr Cys Ser Asn  
 275 280 285  
 Asn Ile Val Asp Cys Arg Gly Lys Gly Leu Met Glu Ile Pro Ala Asn  
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 Leu Pro Glu Gly Ile Val Glu Ile Arg Leu Glu Gln Asn Ser Ile Lys  
 305 310 315 320  
 Ala Ile Pro Ala Gly Ala Phe Thr Gln Tyr Lys Lys Leu Lys Arg Ile  
 325 330 335  
 Asp Ile Ser Lys Asn Gln Ile Ser Asp Ile Ala Pro Asp Ala Phe Gln  
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 Gly Leu Lys Ser Leu Thr Ser Leu Val Leu Tyr Gly Asn Lys Ile Thr  
 355 360 365  
 Glu Ile Ala Lys Gly Leu Phe Asp Gly Leu Val Ser Leu Gln Leu Leu  
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 405 410 415  
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 His Leu Ala Gln Asn Pro Phe Val Cys Asp Cys His Leu Lys Trp Leu  
 435 440 445  
 Ala Asp Tyr Leu Gln Asp Asn Pro Ile Glu Thr Ser Gly Ala Arg Cys  
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 Ser Ser Pro Arg Arg Leu Ala Asn Lys Arg Ile Ser Gln Ile Lys Ser

465	470	475	480
Lys Lys Phe Arg Cys Ser Gly Ser Glu Asp Tyr Arg Ser Arg Phe Ser			
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Ser Glu Cys Phe Met Asp Leu Val Cys Pro Glu Lys Cys Arg Cys Glu			
500	505	510	
Gly Thr Ile Val Asp Cys Ser Asn Gln Lys Leu Val Arg Ile Pro Ser			
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His Leu Pro Glu Tyr Val Thr Asp Leu Arg Leu Asn Asp Asn Glu Val			
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Ser Val Leu Glu Ala Thr Gly Ile Phe Lys Lys Leu Pro Asn Leu Arg			
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Lys Ile Asn Leu Ser Asn Asn Lys Ile Lys Glu Val Arg Glu Gly Ala			
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Phe Asp Gly Ala Ala Ser Val Gln Glu Leu Met Leu Thr Gly Asn Gln			
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Leu Glu Thr Val His Gly Arg Val Phe Arg Gly Leu Ser Gly Leu Lys			
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Thr Leu Met Leu Arg Ser Asn Leu Ile Gly Cys Val Ser Asn Asp Thr			
610	615	620	
Phe Ala Gly Leu Ser Ser Val Arg Leu Leu Ser Leu Tyr Asp Asn Arg			
625	630	635	640
Ile Thr Thr Ile Thr Pro Gly Ala Phe Thr Thr Leu Val Ser Leu Ser			
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Thr Ile Asn Leu Leu Ser Asn Pro Phe Asn Cys Asn Cys His Leu Ala			
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Trp Leu Gly Lys Trp Leu Arg Lys Arg Arg Ile Val Ser Gly Asn Pro			
675	680	685	
Arg Cys Gln Lys Pro Phe Phe Leu Lys Glu Ile Pro Ile Gln Asp Val			
690	695	700	
Ala Ile Gln Asp Phe Thr Cys Asp Gly Asn Glu Glu Ser Ser Cys Gln			
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Leu Ser Pro Arg Cys Pro Glu Gln Cys Thr Cys Met Glu Thr Val Val			
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Arg Cys Ser Asn Lys Gly Leu Arg Ala Leu Pro Arg Gly Met Pro Lys			
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Arg Glu Leu Ser Ala Leu Arg His Leu Thr Leu Ile Asp Leu Ser Asn			
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Asn Ser Ile Ser Met Leu Thr Asn Tyr Thr Phe Ser Asn Met Ser His			
785	790	795	800
Leu Ser Thr Leu Ile Leu Ser Tyr Asn Arg Leu Arg Cys Ile Pro Val			
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His Ala Phe Asn Gly Leu Arg Ser Leu Arg Val Leu Thr Leu His Gly			
820	825	830	
Asn Asp Ile Ser Ser Val Pro Glu Gly Ser Phe Asn Asp Leu Thr Ser			
835	840	845	
Leu Ser His Leu Ala Leu Gly Thr Asn Pro Leu His Cys Asp Cys Ser			
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Leu Arg Trp Leu Ser Glu Trp Val Lys Ala Gly Tyr Lys Glu Pro Gly			
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Ile Val Ala Lys Cys Asn Ala Cys Leu Ser Ser Pro Cys Lys Asn Asn			
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Tyr Ser Tyr Lys Gly Lys Asp Cys Thr Val Pro Ile Asn Thr Cys Ile			
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 Lys Asp Gly Phe Ser Cys Ser Cys Pro Leu Gly Phe Glu Gly Gln Arg  
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 Cys Glu Ile Asn Pro Asp Asp Cys Glu Asp Asn Asp Cys Glu Asn Asn  
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 Gly Phe Ser Cys Glu Cys Val Pro Gly Tyr Ser Gly Lys Leu Cys Glu  
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Val Pro Ile Met Glu Cys Arg Gly Gly Cys Gly Pro Gln Cys Cys Gln		
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Pro Thr Arg Ser Lys Arg Arg Lys Tyr Val Phe Gln Cys Thr Asp Gly		
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Ala Cys Ser		1520

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 <211> 4227  
 <212> DNA  
 <213> Homo sapiens

<400> 245

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<210> 246

<211> 818

<212> PRT

<213> Homo sapiens

<400> 246

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Glu	Lys	Arg	Leu	Glu	Leu	Val	Lys	Gln	Val	Ser	His	Ser	Thr	His	Lys
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Lys	Leu	Thr	Ala	Cys	Leu	Gln	Gly	Gln	Gly	Ala	Glu	Ala	Asp	Lys	
				50		55		60							
Arg	Ser	Lys	Lys	Leu	Pro	Leu	Thr	Thr	Leu	Ala	Gln	Cys	Leu	Met	Glu
				65		70		75						80	
Gly	Ser	Ala	Ile	Leu	Gly	Asp	Asp	Thr	Leu	Leu	Gly	Lys	Met	Leu	Lys
				85		90		95							
Leu	Cys	Gly	Glu	Thr	Glu	Asp	Lys	Leu	Ala	Gln	Glu	Leu	Ile	His	Phe
				100		105		110							
Glu	Leu	Gln	Val	Glu	Arg	Asp	Val	Ile	Glu	Pro	Leu	Phe	Leu	Leu	Ala
				115		120		125							
Glu	Val	Glu	Ile	Pro	Asn	Ile	Gln	Lys	Gln	Arg	Lys	His	Leu	Ala	Lys
				130		135		140							
Leu	Val	Leu	Asp	Met	Asp	Ser	Ser	Arg	Thr	Arg	Trp	Gln	Gln	Thr	Ser
				145		150		155						160	
Lys	Ser	Ser	Gly	Leu	Ser	Ser	Ser	Leu	Gln	Pro	Ala	Gly	Ala	Lys	Ala
				165		170		175							
Asp	Ala	Leu	Arg	Glu	Glu	Met	Glu	Glu	Ala	Ala	Asn	Arg	Val	Glu	Ile
				180		185		190							
Cys	Arg	Asp	Gln	Leu	Ser	Ala	Asp	Met	Tyr	Ser	Phe	Val	Ala	Lys	Glu
				195		200		205							

Ile Asp Tyr Ala Asn Tyr Phe Gln Thr Leu Ile Glu Val Gln Ala Glu  
 210 215 220  
 Tyr His Arg Lys Ser Leu Thr Leu Leu Gln Ala Val Leu Pro Gln Ile  
 225 230 235 240  
 Lys Ala Gln Gln Glu Ala Trp Val Glu Lys Pro Ser Phe Gly Lys Pro  
 245 250 255  
 Leu Glu Glu His Leu Thr Ile Ser Gly Arg Glu Ile Ala Phe Pro Ile  
 260 265 270  
 Glu Ala Cys Val Thr Met Leu Leu Glu Cys Gly Met Gln Glu Glu Gly  
 275 280 285  
 Leu Phe Arg Val Ala Pro Ser Ala Ser Lys Leu Lys Leu Lys Ala  
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 Ala Leu Asp Cys Cys Val Val Asp Val Gln Glu Tyr Ser Ala Asp Pro  
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 His Ala Ile Ala Gly Ala Leu Lys Ser Tyr Leu Arg Glu Leu Pro Glu  
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 Pro Leu Met Thr Phe Glu Leu Tyr Asp Glu Trp Ile Gln Ala Ser Asn  
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 Val Gln Glu Gln Asp Lys Lys Leu Gln Ala Leu Trp Asn Ala Cys Glu  
 355 360 365  
 Lys Leu Pro Lys Ala Asn His Asn Asn Ile Arg Tyr Leu Ile Lys Phe  
 370 375 380  
 Leu Ser Lys Leu Ser Glu Tyr Gln Asp Val Asn Lys Met Thr Pro Ser  
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 Asn Met Ala Ile Val Leu Gly Pro Asn Leu Leu Trp Pro Gln Ala Glu  
 405 410 415  
 Gly Asn Ile Thr Glu Met Met Thr Thr Val Ser Leu Gln Ile Val Gly  
 420 425 430  
 Ile Ile Glu Pro Ile Ile Gln His Ala Asp Trp Phe Phe Pro Gly Glu  
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 545 550 555 560  
 Pro Glu Gln Pro Leu Asp Ser Pro Ala Ala Pro Ala Leu Ser Pro Ser  
 565 570 575  
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 580 585 590  
 Lys Glu Leu Ser Pro Gly Ser Ala Gln Lys Gly Ser Pro Gly Ser Ser  
 595 600 605  
 Gln Gly Thr Ala Cys Ala Gly Thr Gln Pro Gly Ala Gln Pro Gly Ala  
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 Gln Pro Gly Ala Ser Pro Ser Pro Ser Gln Pro Pro Ala Asp Gln Ser  
 625 630 635 640  
 Pro His Thr Leu Arg Lys Val Ser Lys Lys Leu Ala Pro Ile Pro Pro  
 645 650 655  
 Lys Val Pro Phe Gly Gln Pro Gly Ala Met Ala Asp Gln Ser Ala Gly  
 660 665 670  
 Gln Leu Ser Pro Val Ser Leu Ser Pro Thr Pro Pro Ser Thr Pro Ser  
 675 680 685  
 Pro Tyr Gly Leu Ser Tyr Pro Gln Gly Tyr Ser Leu Ala Ser Gly Gln

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Leu	Ser	Pro
Ala	Ala	Ala
Ala	Pro	Pro
Leu	Ala	Ser
705	710	715
Ser	Thr	Leu
Ser	Lys	Ser
Arg	Pro	Thr
Pro	Lys	Pro
Arg	Gln	Arg
725	730	735
Thr	Leu	Pro
Pro	Pro	Gln
Pro	Pro	Pro
Thr	Val	Asn
Leu	Ser	Ala
740	745	750
Pro	Gln	Ser
Thr	Glu	Ala
Ala	Pro	Met
Leu	Asp	Gly
755	760	765
Ser	Met	Ser
Thr	Asp	Leu
Val	His	Phe
Asp	Ile	Pro
Ile	Ser	Ile
770	775	780
Glu	Leu	Gly
Ser	Thr	Leu
Arg	Leu	Ser
Pro	Leu	Glu
785	790	795
His	Ser	Val
Thr	Asp	Lys
Arg	Asp	Ser
Glu	Glu	Glu
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Ala	Leu	

<210> 247

<211> 2850

<212> DNA

<213> Homo sapiens

<400> 247

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<210> 248  
<211> 173  
<212> PRT  
<213> Homo sapiens

<400> 248

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Phe	Ile	Glu	Asp	Leu	Lys	Lys	Tyr	Gly	Ala	Thr	Thr	Val	Val	Arg	Val
				35			40					45			
Cys	Glu	Val	Thr	Tyr	Asp	Lys	Thr	Pro	Leu	Glu	Lys	Asp	Gly	Ile	Thr
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Val	Val	Asp	Trp	Pro	Phe	Asp	Asp	Gly	Ala	Pro	Pro	Pro	Gly	Lys	Val
	65				70				75					80	
Val	Glu	Asp	Trp	Leu	Ser	Leu	Val	Lys	Ala	Lys	Phe	Cys	Glu	Ala	Pro
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Ala	Ile	Gln	Phe	Ile	Arg	Gln	Lys	Arg	Arg	Gly	Ala	Ile	Asn	Ser	Lys
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Gln	Leu	Thr	Tyr	Leu	Glu	Lys	Tyr	Arg	Pro	Lys	Gln	Arg	Leu	Arg	Phe
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Lys	Asp	Pro	His	Thr	His	Lys	Thr	Arg	Cys	Cys	Val	Met			
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<210> 249  
<211> 3853  
<212> DNA  
<213> *Homo sapiens*

<400> 249

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 <212> PRT  
 <213> Homo sapiens

<400> 250

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Tyr Thr Val Gln Gln Tyr Glu Asn Glu Glu Gly Lys Trp Val Leu Ile		
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Gly Ser Pro Leu Val Gly Gln Pro Lys Asn Arg Thr Gly Asp Val Tyr		
65	70	75
Lys Cys Pro Val Gly Arg Gly Glu Ser Leu Pro Cys Val Lys Leu Asp		
85	90	95
Leu Pro Val Asn Thr Ser Ile Pro Asn Val Thr Glu Val Lys Glu Asn		
100	105	110
Met Thr Phe Gly Ser Thr Leu Val Thr Asn Pro Asn Gly Gly Phe Leu		
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Ala Cys Gly Pro Leu Tyr Ala Tyr Arg Cys Gly His Leu His Tyr Thr		
130	135	140
Thr Gly Ile Cys Ser Asp Val Ser Pro Thr Phe Gln Val Val Asn Ser		
145	150	155
Ile Ala Pro Val Gln Glu Cys Ser Thr Gln Leu Asp Ile Val Ile Val		
165	170	175
Leu Asp Gly Ser Asn Ser Ile Tyr Pro Trp Asp Ser Val Thr Ala Phe		
180	185	190
Leu Asn Asp Leu Leu Lys Arg Met Asp Ile Gly Pro Lys Gln Thr Gln		
195	200	205
Val Gly Ile Val Gln Tyr Gly Glu Asn Val Thr His Glu Phe Asn Leu		
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Asn Lys Tyr Ser Ser Thr Glu Glu Val Leu Val Ala Ala Lys Lys Ile		
225	230	235
Val Gln Arg Gly Arg Gln Thr Met Thr Ala Leu Gly Thr Asp Thr		
245	250	255
Ala Arg Lys Glu Ala Phe Thr Glu Ala Arg Gly Ala Arg Arg Gly Val		
260	265	270
Lys Lys Val Met Val Ile Val Thr Asp Gly Glu Ser His Asp Asn His		
275	280	285
Arg Leu Lys Lys Val Ile Gln Asp Cys Glu Asp Glu Asn Ile Gln Arg		
290	295	300
Phe Ser Ile Ala Ile Leu Gly Ser Tyr Asn Arg Gly Asn Leu Ser Thr		
305	310	315
Glu Lys Phe Val Glu Glu Ile Lys Ser Ile Ala Ser Glu Pro Thr Glu		
325	330	335
Lys His Phe Phe Asn Val Ser Asp Glu Leu Ala Leu Val Thr Ile Val		
340	345	350
Lys Thr Leu Gly Glu Arg Ile Phe Ala Leu Glu Ala Thr Ala Asp Gln		
355	360	365
Ser Ala Ala Ser Phe Glu Met Glu Met Ser Gln Thr Gly Phe Ser Ala		
370	375	380
His Tyr Ser Gln Asp Trp Val Met Leu Gly Ala Val Gly Ala Tyr Asp		
385	390	395
Trp Asn Gly Thr Val Val Met Gln Lys Ala Ser Gln Ile Ile Ile Pro		
405	410	415
Arg Asn Thr Thr Phe Asn Val Glu Ser Thr Lys Lys Asn Glu Pro Leu		
420	425	430
Ala Ser Tyr Leu Gly Tyr Thr Val Asn Ser Ala Thr Ala Ser Ser Gly		
435	440	445
Asp Val Leu Tyr Ile Ala Gly Gln Pro Arg Tyr Asn His Thr Gly Gln		
450	455	460
Val Ile Ile Tyr Arg Met Glu Asp Gly Asn Ile Lys Ile Leu Gln Thr		
465	470	475
Leu Ser Gly Glu Gln Ile Gly Ser Tyr Phe Gly Ser Ile Leu Thr Thr		
485	490	495
Thr Asp Ile Asp Lys Asp Ser Asn Thr Asp Ile Leu Leu Val Gly Ala		
500	505	510

Pro Met Tyr Met Gly Thr Glu Lys Glu Glu Gln Gly Lys Val Tyr Val  
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 Tyr Ala Leu Asn Gln Thr Arg Phe Glu Tyr Gln Met Ser Leu Glu Pro  
 530 535 540  
 Ile Lys Gln Thr Cys Cys Ser Ser Arg Gln His Asn Ser Cys Thr Thr  
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 Glu Asn Lys Asn Glu Pro Cys Gly Ala Arg Phe Gly Thr Ala Ile Ala  
 565 570 575  
 Ala Val Lys Asp Leu Asn Leu Asp Gly Phe Asn Asp Ile Val Ile Gly  
 580 585 590  
 Ala Pro Leu Glu Asp Asp His Gly Gly Ala Val Tyr Ile Tyr His Gly  
 595 600 605  
 Ser Gly Lys Thr Ile Arg Lys Glu Tyr Ala Gln Arg Ile Pro Ser Gly  
 610 615 620  
 Gly Asp Gly Lys Thr Leu Lys Phe Phe Gly Gln Ser Ile His Gly Glu  
 625 630 635 640  
 Met Asp Leu Asn Gly Asp Gly Leu Thr Asp Val Thr Ile Gly Gly Leu  
 645 650 655  
 Gly Gly Ala Ala Leu Phe Trp Ser Arg Asp Val Ala Val Val Lys Val  
 660 665 670  
 Thr Met Asn Phe Glu Pro Asn Lys Val Asn Ile Gln Lys Lys Asn Cys  
 675 680 685  
 His Met Glu Gly Lys Glu Thr Val Cys Ile Asn Ala Thr Val Cys Phe  
 690 695 700  
 Glu Val Lys Leu Lys Ser Lys Glu Asp Thr Ile Tyr Glu Ala Asp Leu  
 705 710 715 720  
 Gln Tyr Arg Val Thr Leu Asp Ser Leu Arg Gln Ile Ser Arg Ser Phe  
 725 730 735  
 Phe Ser Gly Thr Gln Glu Arg Lys Val Gln Arg Asn Ile Thr Val Arg  
 740 745 750  
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 755 760 765  
 Phe Gln Asp Ser Val Arg Ile Thr Leu Asp Phe Asn Leu Thr Asp Pro  
 770 775 780  
 Glu Asn Gly Pro Val Leu Asp Asp Ser Leu Pro Asn Ser Val His Glu  
 785 790 795 800  
 Tyr Ile Pro Phe Ala Lys Asp Cys Gly Asn Lys Glu Lys Cys Ile Ser  
 805 810 815  
 Asp Leu Ser Leu His Val Ala Thr Thr Glu Lys Asp Leu Leu Ile Val  
 820 825 830  
 Arg Ser Gln Asn Asp Lys Phe Asn Val Ser Leu Thr Val Lys Asn Thr  
 835 840 845  
 Lys Asp Ser Ala Tyr Asn Thr Arg Thr Ile Val His Tyr Ser Pro Asn  
 850 855 860  
 Leu Val Phe Ser Gly Ile Glu Ala Ile Gln Lys Asp Ser Cys Glu Ser  
 865 870 875 880  
 Asn His Asn Ile Thr Cys Lys Val Gly Tyr Pro Phe Leu Arg Arg Gly  
 885 890 895  
 Glu Met Val Thr Phe Lys Ile Leu Phe Gln Phe Asn Thr Ser Tyr Leu  
 900 905 910  
 Met Glu Asn Val Thr Ile Tyr Leu Ser Ala Thr Ser Asp Ser Glu Glu  
 915 920 925  
 Pro Pro Glu Thr Leu Ser Asp Asn Val Val Asn Ile Ser Ile Pro Val  
 930 935 940  
 Lys Tyr Glu Val Gly Leu Gln Phe Tyr Ser Ser Ala Ser Glu Tyr His  
 945 950 955 960  
 Ile Ser Ile Ala Ala Asn Glu Thr Val Pro Glu Val Ile Asn Ser Thr  
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 Glu Asp Ile Gly Asn Glu Ile Asn Ile Phe Tyr Leu Ile Arg Lys Ser  
 980 985 990  
 Gly Ser Phe Pro Met Pro Glu Leu Lys Leu Ser Ile Ser Phe Pro Asn

995	1000	1005													
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Asn	Leu	Thr	Ser	Ser	Asp	Ile	Ser	Gln	Val	Asn	Val	Ser	Leu	Ile	Leu
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Trp	Lys	Pro	Thr	Phe	Ile	Lys	Ser	Tyr	Phe	Ser	Ser	Leu	Asn	Leu	Thr
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Ile	Arg	Gly	Glu	Leu	Arg	Ser	Glu	Asn	Ala	Ser	Leu	Val	Leu	Ser	Ser
1105						1110					1115				1120
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Pro	Gly	Arg	Val	Pro	Leu	Trp	Val	Ile	Leu	Leu	Ser	Ala	Phe	Ala	Gly
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Leu	Leu	Leu	Leu	Met	Leu	Leu	Ile	Leu	Ala	Leu	Trp	Lys	Ile	Gly	Phe
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 <212> DNA  
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<400> 251

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<210> 252  
 <211> 1669  
 <212> PRT  
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 35 40 45  
 Gly Glu Arg Gly Leu Pro Gly Leu Gln Gly Val Ile Gly Phe Pro Gly  
 50 55 60  
 Met Gln Gly Pro Glu Gly Pro Gln Gly Pro Pro Gly Gln Lys Gly Asp  
 65 70 75 80  
 Thr Gly Glu Pro Gly Leu Pro Gly Thr Lys Gly Thr Arg Gly Pro Pro  
 85 90 95  
 Gly Ala Ser Gly Tyr Pro Gly Asn Pro Gly Leu Pro Gly Ile Pro Gly  
 100 105 110  
 Gln Asp Gly Pro Pro Gly Pro Pro Gly Ile Pro Gly Cys Asn Gly Thr  
 115 120 125  
 Lys Gly Glu Arg Gly Pro Leu Gly Pro Pro Gly Leu Pro Gly Phe Ala  
 130 135 140  
 Gly Asn Pro Gly Pro Pro Gly Leu Pro Gly Met Lys Gly Asp Pro Gly  
 145 150 155 160  
 Glu Ile Leu Gly His Val Pro Gly Met Leu Leu Lys Gly Glu Arg Gly  
 165 170 175  
 Phe Pro Gly Ile Pro Gly Thr Pro Gly Pro Pro Gly Leu Pro Gly Leu  
 180 185 190  
 Gln Gly Pro Val Gly Pro Pro Gly Phe Thr Gly Pro Pro Gly Pro Pro  
 195 200 205  
 Gly Pro Pro Gly Pro Pro Gly Glu Lys Gly Gln Met Gly Leu Ser Phe  
 210 215 220  
 Gln Gly Pro Lys Gly Asp Lys Gly Asp Gln Gly Val Ser Gly Pro Pro  
 225 230 235 240  
 Gly Val Pro Gly Gln Ala Gln Val Gln Glu Lys Gly Asp Phe Ala Thr  
 245 250 255  
 Lys Gly Glu Lys Gly Gln Lys Gly Glu Pro Gly Phe Gln Gly Met Pro  
 260 265 270  
 Gly Val Gly Glu Lys Gly Glu Pro Gly Lys Pro Gly Pro Arg Gly Lys  
 275 280 285  
 Pro Gly Lys Asp Gly Asp Lys Gly Glu Lys Gly Ser Pro Gly Phe Pro  
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 Gly Glu Pro Gly Tyr Pro Gly Leu Ile Gly Arg Gln Gly Pro Gln Gly  
 305 310 315 320  
 Glu Lys Gly Glu Ala Gly Pro Pro Gly Pro Pro Gly Ile Val Ile Gly  
 325 330 335  
 Thr Gly Pro Leu Gly Glu Lys Gly Glu Arg Gly Tyr Pro Gly Thr Pro  
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 355 360 365  
 Gln Pro Gly Pro Pro Gly Leu Pro Val Pro Gly Gln Ala Gly Ala Pro  
 370 375 380  
 Gly Phe Pro Gly Glu Arg Gly Glu Lys Gly Asp Arg Gly Phe Pro Gly  
 385 390 395 400  
 Thr Ser Leu Pro Gly Pro Ser Gly Arg Asp Gly Leu Pro Gly Pro Pro  
 405 410 415  
 Gly Ser Pro Gly Pro Pro Gly Gln Pro Gly Tyr Thr Asn Gly Ile Val  
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 Glu Cys Gln Pro Gly Pro Pro Gly Asp Gln Gly Pro Pro Gly Ile Pro  
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 Gly Gln Pro Gly Phe Ile Gly Glu Ile Gly Glu Lys Gly Gln Lys Gly  
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 Glu Ser Cys Leu Ile Cys Asp Ile Asp Gly Tyr Arg Gly Pro Pro Gly  
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Pro Gln Gly Pro Pro Gly Glu Ile Gly Phe Pro Gly Gln Pro Gly Ala  
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 Lys Gly Asp Arg Gly Leu Pro Gly Arg Asp Gly Val Ala Gly Val Pro  
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 Gly Pro Gln Gly Thr Pro Gly Leu Ile Gly Gln Pro Gly Ala Lys Gly  
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 Glu Pro Gly Glu Phe Tyr Phe Asp Leu Arg Leu Lys Gly Asp Lys Gly  
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 Asp Pro Gly Phe Pro Gly Gln Pro Gly Met Pro Gly Arg Ala Gly Ser  
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 Pro Gly Arg Asp Gly His Pro Gly Leu Pro Gly Pro Lys Gly Ser Pro  
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 Gly Ser Val Gly Leu Lys Gly Glu Arg Gly Pro Pro Gly Gly Val Gly  
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 Phe Pro Gly Ser Arg Gly Asp Thr Gly Pro Pro Gly Pro Pro Gly Tyr  
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 Ile Gly Pro Pro Gly Ala Arg Gly Pro Pro Gly Gly Gln Gly Pro Pro  
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 Gly Leu Ser Gly Pro Pro Gly Ile Lys Gly Glu Lys Gly Phe Pro Gly  
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 Phe Pro Gly Leu Asp Met Pro Gly Pro Lys Gly Asp Lys Gly Ala Gln  
                   835                  840                  845  
 Gly Leu Pro Gly Ile Thr Gly Gln Ser Gly Leu Pro Gly Leu Pro Gly  
                   850                  855                  860  
 Gln Gln Gly Ala Pro Gly Ile Pro Gly Phe Pro Gly Ser Lys Gly Glu  
                   865                  870                  875                  880  
 Met Gly Val Met Gly Thr Pro Gly Gln Pro Gly Ser Pro Gly Pro Val  
                   885                  890                  895  
 Gly Ala Pro Gly Leu Pro Gly Glu Lys Gly Asp His Gly Phe Pro Gly  
                   900                  905                  910  
 Ser Ser Gly Pro Arg Gly Asp Pro Gly Leu Lys Gly Asp Lys Gly Asp  
                   915                  920                  925  
 Val Gly Leu Pro Gly Lys Pro Gly Ser Met Asp Lys Val Asp Met Gly  
                   930                  935                  940  
 Ser Met Lys Gly Gln Lys Gly Asp Gln Gly Glu Lys Gly Gln Ile Gly  
                   945                  950                  955                  960  
 Pro Ile Gly Glu Lys Gly Ser Arg Gly Asp Pro Gly Thr Pro Gly Val

	965	970	975												
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			995				1000					1005			
Pro	Lys	Gly	Ser	Val	Gly	Gly	Met	Gly	Leu	Pro	Gly	Thr	Pro	Gly	Glu
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	1025				1030			1035					1040		
Gly	Asp	Lys	Gly	Ala	Lys	Gly	Glu	Lys	Gly	Gln	Ala	Gly	Pro	Pro	Gly
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Ile	Gly	Ile	Pro	Gly	Leu	Arg	Gly	Glu	Lys	Gly	Asp	Gln	Gly	Ile	Ala
			1060				1065					1070			
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	1075				1080			1085							
Ile	Pro	Gly	Met	Pro	Gly	Ser	Pro	Gly	Leu	Lys	Gly	Ser	Pro	Gly	Ser
	1090				1095				1100						
Val	Gly	Tyr	Pro	Gly	Ser	Pro	Gly	Leu	Pro	Gly	Glu	Lys	Gly	Asp	Lys
	1105				1110				1115				1120		
Gly	Leu	Pro	Gly	Leu	Asp	Gly	Ile	Pro	Gly	Val	Lys	Gly	Glu	Ala	Gly
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Leu	Pro	Gly	Thr	Pro	Gly	Pro	Thr	Gly	Pro	Ala	Gly	Gln	Lys	Gly	Glu
			1140				1145					1150			
Pro	Gly	Ser	Asp	Gly	Ile	Pro	Gly	Ser	Ala	Gly	Glu	Lys	Gly	Glu	Pro
			1155				1160					1165			
Gly	Leu	Pro	Gly	Arg	Gly	Phe	Pro	Gly	Phe	Pro	Gly	Ala	Lys	Gly	Asp
			1170				1175					1180			
Lys	Gly	Ser	Lys	Gly	Glu	Val	Gly	Phe	Pro	Gly	Leu	Ala	Gly	Ser	Pro
	1185				1190				1195				1200		
Gly	Ile	Pro	Gly	Ser	Lys	Gly	Glu	Gln	Gly	Phe	Met	Gly	Pro	Pro	Gly
			1205					1210					1215		
Pro	Gln	Gly	Gln	Pro	Gly	Leu	Pro	Gly	Ser	Pro	Gly	His	Ala	Thr	Glu
	1220					1225				1230					
Gly	Pro	Lys	Gly	Asp	Arg	Gly	Pro	Gln	Gly	Gln	Pro	Gly	Leu	Pro	Gly
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Leu	Pro	Gly	Pro	Met	Gly	Pro	Pro	Gly	Leu	Pro	Gly	Ile	Asp	Gly	Val
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Pro	Gly	Phe	Gln	Gly	Pro	Lys	Gly	Leu	Pro	Gly	Leu	Gln	Gly	Ile	Lys
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Leu	Pro	Gly	Pro	Glu	Gly	Pro	Pro	Gly	Leu	Lys	Gly	Leu	Gln	Gly	Leu
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Glu	Met	Gly	Pro	Ala	Gly	Pro	Thr	Gly	Pro	Arg	Gly	Phe	Pro	Gly	Pro
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<210> 253  
<211> 2798  
<212> DNA  
<213> *Homo sapiens*

<400> 253

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<210> 254

<211> 750

<212> PRT

<213> Homo sapiens

<400> 254

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									20		25			30	
Leu	His	Gln	Gln	Gln	Pro	Leu	His	Pro	Glu	Trp	Ala	Ala	Leu	Ala	Lys
									35		40			45	
Lys	Gln	Leu	Lys	Gly	Lys	Asn	Pro	Glu	Asp	Leu	Ile	Trp	His	Thr	Pro
									50		55			60	
Glu	Gly	Ile	Ser	Ile	Lys	Pro	Leu	Tyr	Ser	Lys	Arg	Asp	Thr	Met	Asp
									65		70			75	80
Leu	Pro	Glu	Glu	Leu	Pro	Gly	Val	Lys	Pro	Phe	Thr	Arg	Gly	Pro	Tyr
									85		90			95	
Pro	Thr	Met	Tyr	Thr	Phe	Arg	Pro	Trp	Thr	Ile	Arg	Gln	Tyr	Ala	Gly
									100		105			110	
Phe	Ser	Thr	Val	Glu	Glu	Ser	Asn	Lys	Phe	Tyr	Lys	Asp	Asn	Ile	Lys
									115		120			125	
Ala	Gly	Gln	Gln	Gly	Leu	Ser	Val	Ala	Phe	Asp	Leu	Ala	Thr	His	Arg
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Gly	Tyr	Asp	Ser	Asp	Asn	Pro	Arg	Val	Arg	Gly	Asp	Val	Gly	Met	Ala
									145		150			155	160
Gly	Val	Ala	Ile	Asp	Thr	Val	Glu	Asp	Thr	Lys	Ile	Leu	Phe	Asp	Gly
									165		170			175	
Ile	Pro	Leu	Glu	Lys	Met	Ser	Val	Ser	Met	Thr	Met	Asn	Gly	Ala	Val
									180		185			190	
Ile	Pro	Val	Leu	Ala	Asn	Phe	Ile	Val	Thr	Gly	Glu	Glu	Gly	Val	
									195		200			205	
Pro	Lys	Glu	Lys	Leu	Thr	Gly	Thr	Ile	Gln	Asn	Asp	Ile	Leu	Lys	Glu
									210		215			220	
Phe	Met	Val	Arg	Asn	Thr	Tyr	Ile	Phe	Pro	Pro	Glu	Pro	Ser	Met	Lys
									225		230			235	240
Ile	Ile	Ala	Asp	Ile	Phe	Glu	Tyr	Thr	Ala	Lys	His	Met	Pro	Lys	Phe
									245		250			255	
Asn	Ser	Ile	Ser	Ile	Ser	Gly	Tyr	His	Met	Gln	Glu	Ala	Gly	Ala	Asp

260	265	270
Ala Ile Leu Glu Leu Ala Tyr Thr	Leu Ala Asp Gly Leu Glu Tyr Ser	
275	280	285
Arg Thr Gly Leu Gln Ala Gly Leu Thr Ile Asp Glu Phe Ala Pro Arg		
290	295	300
Leu Ser Phe Phe Trp Gly Ile Gly Met Asn Phe Tyr Met Glu Ile Ala		
305	310	315
Lys Met Arg Ala Gly Arg Arg Leu Trp Ala His Leu Ile Glu Lys Met		
325	330	335
Phe Gln Pro Lys Asn Ser Lys Ser Leu Leu Leu Arg Ala His Cys Gln		
340	345	350
Thr Ser Gly Trp Ser Leu Thr Glu Gln Asp Pro Tyr Asn Asn Ile Val		
355	360	365
Arg Thr Ala Ile Glu Ala Met Ala Ala Val Phe Gly Gly Thr Gln Ser		
370	375	380
Leu His Thr Asn Ser Phe Asp Glu Ala Leu Gly Leu Pro Thr Val Lys		
385	390	395
Ser Ala Arg Ile Ala Arg Asn Thr Gln Ile Ile Ile Gln Glu Glu Ser		
405	410	415
Gly Ile Pro Lys Val Ala Asp Pro Trp Gly Gly Ser Tyr Met Met Glu		
420	425	430
Cys Leu Thr Asn Asp Val Tyr Asp Ala Ala Leu Lys Leu Ile Asn Glu		
435	440	445
Ile Glu Glu Met Gly Gly Met Ala Lys Ala Val Ala Glu Gly Ile Pro		
450	455	460
Lys Leu Arg Ile Glu Glu Cys Ala Ala Arg Arg Gln Ala Arg Ile Asp		
465	470	475
Ser Gly Ser Glu Val Ile Val Gly Val Asn Lys Tyr Gln Leu Glu Lys		
485	490	495
Glu Asp Ala Val Glu Val Leu Ala Ile Asp Asn Thr Ser Val Arg Asn		
500	505	510
Arg Gln Ile Glu Lys Leu Lys Ile Lys Ser Ser Arg Asp Gln Ala		
515	520	525
Leu Ala Glu His Cys Leu Ala Ala Leu Thr Glu Cys Ala Ala Ser Gly		
530	535	540
Asp Gly Asn Ile Leu Ala Leu Ala Val Asp Ala Ser Arg Ala Arg Cys		
545	550	555
Thr Val Gly Glu Ile Thr Asp Ala Leu Lys Lys Val Phe Gly Glu His		
565	570	575
Lys Ala Asn Asp Arg Met Val Ser Gly Ala Tyr Arg Gln Glu Phe Gly		
580	585	590
Glu Ser Lys Glu Ile Thr Ser Ala Ile Lys Arg Val His Lys Phe Met		
595	600	605
Glu Arg Glu Gly Arg Arg Pro Arg Leu Leu Val Ala Lys Met Gly Gln		
610	615	620
Asp Gly His Asp Arg Gly Ala Lys Val Ile Ala Thr Gly Phe Ala Asp		
625	630	635
Leu Gly Phe Asp Val Asp Ile Gly Pro Leu Phe Gln Thr Pro Arg Glu		
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Val Ala Gln Gln Ala Val Asp Ala Asp Val His Ala Val Gly Val Ser		
660	665	670
Thr Leu Ala Ala Gly His Lys Thr Leu Val Pro Glu Leu Ile Lys Glu		
675	680	685
Leu Asn Ser Leu Gly Arg Pro Asp Ile Leu Val Met Cys Gly Val		
690	695	700
Ile Pro Pro Gln Asp Tyr Glu Phe Leu Phe Glu Val Gly Val Ser Asn		
705	710	715
Val Phe Gly Pro Gly Thr Arg Ile Pro Lys Ala Ala Val Gln Val Leu		
725	730	735
Asp Asp Ile Glu Lys Cys Leu Glu Lys Lys Gln Gln Ser Val		
740	745	750

<210> 255  
<211> 806  
<212> DNA  
<213> *Homo sapiens*

· <400> 255

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<210> 256

<211> 9192

<212> DNA

<213> Homo sapiens

<400> 256

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<212> PRT  
<213> Homo sapiens

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Phe Lys Ile Ile Asp Glu Asn Thr Val His Met Ser Trp Ala Glu Pro  
35 40 45  
Val Asp Pro Ile Val Gly Tyr Arg Ile Thr Val Asp Pro Thr Thr Asp  
50 55 60  
Gly Pro Thr Lys Glu Phe Thr Leu Ser Ala Ser Thr Thr Glu Thr Leu  
65 70 75 80  
Leu Ser Glu Leu Val Pro Glu Thr Glu Tyr Val Val Thr Ile Thr Ser  
85 90 95  
Tyr Asp Glu Val Glu Glu Ser Val Pro Val Ile Gly Gln Leu Thr Ile  
100 105 110  
Gln Thr Gly Ser Ser Thr Lys Pro Val Glu Lys Lys Pro Gly Lys Thr  
115 120 125  
Glu Ile Gln Lys Cys Ser Val Ser Ala Trp Thr Asp Leu Val Phe Leu  
130 135 140  
Val Asp Gly Ser Trp Ser Val Gly Arg Asn Asn Phe Lys Tyr Ile Leu  
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Asp Phe Ile Ala Ala Leu Val Ser Ala Phe Asp Ile Gly Glu Glu Lys  
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Thr Arg Val Gly Val Val Gln Tyr Ser Ser Asp Thr Arg Thr Glu Phe  
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Asn Leu Asn Gln Tyr Tyr Gln Arg Asp Glu Leu Leu Ala Ala Ile Lys  
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Lys Ile Pro Tyr Lys Gly Gly Asn Thr Met Thr Gly Asp Ala Ile Asp  
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Tyr Leu Val Lys Asn Thr Phe Thr Glu Ser Ala Gly Ala Arg Val Gly  
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Val Glu Ile Pro Ala Arg Glu Leu Arg Asn Val Gly Val Glu Val Phe  
260 265 270  
Ser Leu Gly Ile Lys Ala Ala Asp Ala Lys Glu Leu Lys Gln Ile Ala  
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Ser Thr Pro Ser Leu Asn His Val Phe Asn Val Ala Asn Phe Asp Ala  
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Gln Ile Ser Val Ser Ala Met Lys Gly Met Thr Ser Ser Glu Pro Ile  
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Ser Ile Met Glu Lys Thr Gln Pro Met Lys Val Gln Val Glu Cys Ser

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Ser Glu Val Thr Ser Tyr Gly	Phe Lys Thr Asn Trp Ser	Pro Ala Gly
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Glu Asn Val Phe Ser Tyr His	Ile Thr Tyr Lys Glu Ala Ala	Gly Asp
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Asp Glu Val Thr Val Val	Glu Pro Ala Ser Ser	Thr Ser Val Val Leu
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Tyr Glu Asp Gly Phe Ser	Ile Pro Leu Ala Gly	Glu Glu Thr Thr Glu
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885	890	895
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 His Cys Phe Thr Gly Leu Ser Pro Asp Thr Asp Tyr Gly Val Thr Val  
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 His Thr Thr Val Lys Pro Thr Glu Ala Pro Thr Glu Pro Pro Thr Pro  
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Thr Asp Gly Arg Ser Gln Asp Glu Val Lys Lys Ala Ala Leu Val Ile		
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Tyr Asn Glu Leu Ala Asn Ile Ala Ser Lys Pro Ser Glu Arg His Val		
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Phe Ile Val Asp Asp Phe Glu Ser Phe Glu Lys Ile Glu Asp Asn Leu		
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<210> 261  
<211> 1464  
<212> PRT  
<213> *Homo sapiens*

<400> 261  
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 Glu Asp Ile Pro Pro Ile Thr Cys Val Gln Asn Gly Leu Arg Tyr His  
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 Asp Arg Asp Val Trp Lys Pro Glu Pro Cys Arg Ile Cys Val Cys Asp  
                   50                  55                  60  
 Asn Gly Lys Val Leu Cys Asp Asp Val Ile Cys Asp Glu Thr Lys Asn  
                   65                  70                  75                  80  
 Cys Pro Gly Ala Glu Val Pro Glu Gly Glu Cys Cys Pro Val Cys Pro  
                   85                  90                  95  
 Asp Gly Ser Glu Ser Pro Thr Asp Gln Glu Thr Thr Gly Val Glu Gly  
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 Pro Lys Gly Asp Thr Gly Pro Arg Gly Pro Arg Gly Pro Ala Gly Pro  
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 Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Leu Gly Gly Asn Phe Ala  
                   145                150                155                160  
 Pro Gln Leu Ser Tyr Gly Tyr Asp Glu Lys Ser Thr Gly Gly Ile Ser  
                   165                170                175  
 Val Pro Gly Pro Met Gly Pro Ser Gly Pro Arg Gly Leu Pro Gly Pro  
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 Pro Gly Ala Pro Gly Pro Gln Gly Phe Gln Gly Pro Pro Gly Glu Pro  
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 Pro Gly Glu Arg Gly Pro Pro Gly Pro Gln Gly Ala Arg Gly Leu Pro  
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 Gly Thr Ala Gly Leu Pro Gly Met Lys Gly His Arg Gly Phe Ser Gly  
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 Leu Asp Gly Ala Lys Gly Asp Ala Gly Pro Ala Gly Pro Lys Gly Glu  
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 Gly Leu Pro Gly Glu Arg Gly Arg Pro Gly Ala Pro Gly Pro Ala Gly  
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                   420                425                430  
 Ser Gly Glu Pro Gly Ala Pro Gly Ser Lys Gly Asp Thr Gly Ala Lys  
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 Gly Glu Pro Gly Pro Val Gly Val Gln Gly Pro Pro Gly Pro Ala Gly  
                   450                455                460  
 Glu Glu Gly Lys Arg Gly Ala Arg Gly Glu Pro Gly Pro Thr Gly Leu  
                   465                470                475                480  
 Pro Gly Pro Pro Gly Glu Arg Gly Gly Pro Gly Ser Arg Gly Phe Pro  
                   485                490                495  
 Gly Ala Asp Gly Val Ala Gly Pro Lys Gly Pro Ala Gly Glu Arg Gly

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515	520	525
Pro Gly Glu Ala Gly Leu Pro Gly Ala Lys Gly Leu Thr Gly Ser Pro		
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Gly Ser Pro Gly Pro Asp Gly Lys Thr Gly Pro Pro Gly Pro Ala Gly		
545	550	555
Gln Asp Gly Arg Pro Gly Pro Pro Gly Pro Pro Gly Ala Arg Gly Gln		
565	570	575
Ala Gly Val Met Gly Phe Pro Gly Pro Lys Gly Ala Ala Gly Glu Pro		
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Gly Lys Ala Gly Glu Arg Gly Val Pro Gly Pro Pro Gly Ala Val Gly		
595	600	605
Pro Ala Gly Lys Asp Gly Glu Ala Gly Ala Gln Gly Pro Pro Gly Pro		
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Ala Gly Pro Ala Gly Glu Arg Gly Glu Gln Gly Pro Ala Gly Ser Pro		
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Gly Phe Gln Gly Leu Pro Gly Pro Ala Gly Pro Pro Gly Glu Ala Gly		
645	650	655
Lys Pro Gly Glu Gln Gly Val Pro Gly Asp Leu Gly Ala Pro Gly Pro		
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Ser Gly Ala Arg Gly Glu Arg Gly Phe Pro Gly Glu Arg Gly Val Gln		
675	680	685
Gly Pro Pro Gly Pro Ala Gly Pro Arg Gly Ala Asn Gly Ala Pro Gly		
690	695	700
Asn Asp Gly Ala Lys Gly Asp Ala Gly Ala Pro Gly Ala Pro Gly Ser		
705	710	715
Gln Gly Ala Pro Gly Leu Gln Gly Met Pro Gly Glu Arg Gly Ala Ala		
725	730	735
Gly Leu Pro Gly Pro Lys Gly Asp Arg Gly Asp Ala Gly Pro Lys Gly		
740	745	750
Ala Asp Gly Ser Pro Gly Lys Asp Gly Val Arg Gly Leu Thr Gly Pro		
755	760	765
Ile Gly Pro Pro Gly Pro Ala Gly Ala Pro Gly Asp Lys Gly Glu Ser		
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Gly Pro Ser Gly Pro Ala Gly Pro Thr Gly Ala Arg Gly Ala Pro Gly		
785	790	795
Asp Arg Gly Glu Pro Gly Pro Pro Gly Pro Ala Gly Phe Ala Gly Pro		
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Pro Gly Ala Asp Gly Gln Pro Gly Ala Lys Gly Glu Pro Gly Asp Ala		
820	825	830
Gly Ala Lys Gly Asp Ala Gly Pro Pro Gly Pro Ala Gly Pro Ala Gly		
835	840	845
Pro Pro Gly Pro Ile Gly Asn Val Gly Ala Pro Gly Ala Lys Gly Ala		
850	855	860
Arg Gly Ser Ala Gly Pro Pro Gly Ala Thr Gly Phe Pro Gly Ala Ala		
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Gly Arg Val Gly Pro Pro Gly Pro Ser Gly Asn Ala Gly Pro Pro Gly		
885	890	895
Pro Pro Gly Pro Ala Gly Lys Glu Gly Lys Gly Pro Arg Gly Glu		
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Thr Gly Pro Ala Gly Arg Pro Gly Glu Val Gly Pro Pro Gly Pro Pro		
915	920	925
Gly Pro Ala Gly Glu Lys Gly Ser Pro Gly Ala Asp Gly Pro Ala Gly		
930	935	940
Ala Pro Gly Thr Pro Gly Pro Gln Gly Ile Ala Gly Gln Arg Gly Val		
945	950	955
Val Gly Leu Pro Gly Gln Arg Gly Glu Arg Gly Phe Pro Gly Leu Pro		
965	970	975
Gly Pro Ser Gly Glu Pro Gly Lys Gln Gly Pro Ser Gly Ala Ser Gly		
980	985	990

Glu Arg Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Leu Ala Gly Pro  
 995 1000 1005  
 Pro Gly Glu Ser Gly Arg Glu Gly Ala Pro Ala Ala Glu Gly Ser Pro  
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 Gly Arg Asp Gly Ser Pro Gly Ala Lys Gly Asp Arg Gly Glu Thr Gly  
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 Pro Ala Gly Pro Pro Gly Ala Pro Gly Ala Pro Gly Ala Pro Gly Pro  
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 Gly Pro Ala Gly Pro Val Gly Pro Val Gly Ala Arg Gly Pro Ala Gly  
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 Arg Gly Ile Lys Gly His Arg Gly Phe Ser Gly Leu Gln Gly Pro Pro  
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 1125 1130 1135  
 Pro Ala Gly Pro Arg Gly Pro Pro Gly Ser Ala Gly Ala Pro Gly Lys  
 1140 1145 1150  
 Asp Gly Leu Asn Gly Leu Pro Gly Pro Ile Gly Pro Pro Gly Pro Arg  
 1155 1160 1165  
 Gly Arg Thr Gly Asp Ala Gly Pro Val Gly Pro Pro Gly Pro Pro Gly  
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 Met Asp Gln Gln Thr Gly Asn Leu Lys Lys Ala Leu Leu Lys Gly  
 1380 1385 1390  
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 1395 1400 1405  
 Ser Val Thr Val Asp Gly Cys Thr Ser His Thr Gly Ala Trp Gly Lys  
 1410 1415 1420  
 Thr Val Ile Glu Tyr Lys Thr Thr Lys Ser Ser Arg Leu Pro Ile Ile  
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<211> 2574  
<212> DNA  
<213> Homo sapiens

<400> 262

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<210> 263  
<211> 412  
<212> PRT  
<213> Homo sapiens

<400> 263

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Gly His Ile Lys Lys Lys Arg Val Glu Ala Ile Arg Gly Gln Ile Leu

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Val Pro Tyr Gln Val Leu Ala Leu Tyr Asn Ser Thr Arg Glu Leu Leu		
65 70 75 80		
Glu Glu Met His Gly Glu Arg Glu Glu Gly Cys Thr Gln Glu Asn Thr		
85 90 95		
Glu Ser Glu Tyr Tyr Ala Lys Glu Ile His Lys Phe Asp Met Ile Gln		
100 105 110		
Gly Leu Ala Glu His Asn Glu Leu Ala Val Cys Pro Lys Gly Ile Thr		
115 120 125		
Ser Lys Val Phe Arg Phe Asn Val Ser Ser Val Glu Lys Asn Arg Thr		
130 135 140		
Asn Leu Phe Arg Ala Glu Phe Arg Val Leu Arg Val Pro Asn Pro Ser		
145 150 155 160		
Ser Lys Arg Asn Glu Gln Arg Ile Glu Leu Phe Gln Ile Leu Arg Pro		
165 170 175		
Asp Glu His Ile Ala Lys Gln Arg Tyr Ile Gly Gly Lys Asn Leu Pro		
180 185 190		
Thr Arg Gly Thr Ala Glu Trp Leu Ser Phe Asp Val Thr Asp Thr Val		
195 200 205		
Arg Glu Trp Leu Leu Arg Arg Glu Ser Asn Leu Gly Leu Glu Ile Ser		
210 215 220		
Ile His Cys Pro Cys His Thr Phe Gln Pro Asn Gly Asp Ile Leu Glu		
225 230 235 240		
Asn Ile His Glu Val Met Glu Ile Lys Phe Lys Gly Val Asp Asn Glu		
245 250 255		
Asp Asp His Gly Arg Gly Asp Leu Gly Arg Leu Lys Lys Gln Lys Asp		
260 265 270		
His His Asn Pro His Leu Ile Leu Met Met Ile Pro Pro His Arg Leu		
275 280 285		
Asp Asn Pro Gly Gln Gly Gln Arg Lys Lys Arg Ala Leu Asp Thr		
290 295 300		
Asn Tyr Cys Phe Arg Asn Leu Glu Glu Asn Cys Cys Val Arg Pro Leu		
305 310 315 320		
Tyr Ile Asp Phe Arg Gln Asp Leu Gly Trp Lys Trp Val His Glu Pro		
325 330 335		
Lys Gly Tyr Tyr Ala Asn Phe Cys Ser Gly Pro Cys Pro Tyr Leu Arg		
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Ser Ala Asp Thr Thr His Ser Thr Val Leu Gly Leu Tyr Asn Thr Leu		
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<210> 264  
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 <212> DNA  
 <213> Homo sapiens

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 <223> n = A,T,C or G

<400> 264

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				ccgg	ccaa	

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<210> 265  
 <211> 1366  
 <212> PRT  
 <213> Homo sapiens

<400> 265  
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 Gly Pro Ala Gly Asp Arg Gly Pro Arg Gly Glu Arg Gly Pro Pro Gly  
 35 40 45  
 Pro Pro Gly Arg Asp Gly Glu Asp Gly Pro Thr Gly Pro Pro Gly Pro  
 50 55 60  
 Pro Gly Pro Pro Gly Pro Pro Gly Leu Gly Gly Asn Phe Ala Ala Gln  
 65 70 75 80  
 Tyr Asp Gly Lys Gly Val Gly Leu Gly Pro Gly Pro Met Gly Leu Met  
 85 90 95  
 Gly Pro Arg Gly Pro Pro Gly Ala Ala Gly Ala Pro Gly Pro Gln Gly  
 100 105 110  
 Phe Gln Gly Pro Ala Gly Glu Pro Gly Glu Pro Gly Gln Thr Gly Pro  
 115 120 125  
 Ala Gly Ala Arg Gly Pro Ala Gly Pro Pro Gly Lys Ala Gly Glu Asp  
 130 135 140  
 Gly His Pro Gly Lys Pro Gly Arg Pro Gly Glu Arg Gly Val Val Gly  
 145 150 155 160  
 Pro Gln Gly Ala Arg Gly Phe Pro Gly Thr Pro Gly Leu Pro Gly Phe  
 165 170 175  
 Lys Gly Ile Arg Gly His Asn Gly Leu Asp Gly Leu Lys Gly Gln Pro  
 180 185 190  
 Gly Ala Pro Gly Val Lys Gly Glu Pro Gly Ala Pro Gly Glu Asn Gly  
 195 200 205  
 Thr Pro Gly Gln Thr Gly Ala Arg Gly Leu Pro Gly Glu Arg Gly Arg  
 210 215 220  
 Val Gly Ala Pro Gly Pro Ala Gly Ala Arg Gly Ser Asp Gly Ser Val  
 225 230 235 240

Gly Pro Val Gly Pro Ala Gly Pro Ile Gly Ser Ala Gly Pro Pro Gly  
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 Phe Pro Gly Ala Pro Gly Pro Lys Gly Glu Ile Gly Ala Val Gly Asn  
                   260                  265                  270  
 Ala Gly Pro Ala Gly Pro Ala Gly Pro Arg Gly Glu Val Gly Leu Pro  
                   275                  280                  285  
 Gly Leu Ser Gly Pro Val Gly Pro Pro Gly Asn Pro Gly Ala Asn Gly  
                   290                  295                  300  
 Leu Thr Gly Ala Lys Gly Ala Ala Gly Leu Pro Gly Val Ala Gly Ala  
                   305                  310                  315                  320  
 Pro Gly Leu Pro Gly Pro Arg Gly Ile Pro Gly Pro Val Gly Ala Ala  
                   325                  330                  335  
 Gly Ala Thr Gly Ala Arg Gly Leu Val Gly Glu Pro Gly Pro Ala Gly  
                   340                  345                  350  
 Ser Lys Gly Glu Ser Gly Asn Lys Gly Glu Pro Gly Ser Ala Gly Pro  
                   355                  360                  365  
 Gln Gly Pro Pro Gly Pro Ser Gly Glu Gly Lys Arg Gly Pro Asn  
                   370                  375                  380  
 Gly Glu Ala Gly Ser Ala Gly Pro Pro Gly Pro Pro Gly Leu Arg Gly  
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 Ser Pro Gly Ser Arg Gly Leu Pro Gly Ala Asp Gly Arg Ala Gly Val  
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 Met Gly Pro Pro Gly Ser Arg Gly Ala Ser Gly Pro Ala Gly Val Arg  
                   420                  425                  430  
 Gly Pro Asn Gly Asp Ala Gly Arg Pro Gly Glu Pro Gly Leu Met Gly  
                   435                  440                  445  
 Pro Arg Gly Leu Pro Gly Ser Pro Gly Asn Ile Gly Pro Ala Gly Lys  
                   450                  455                  460  
 Glu Gly Pro Val Gly Leu Pro Gly Ile Asp Gly Arg Pro Gly Pro Ile  
                   465                  470                  475                  480  
 Gly Pro Ala Gly Ala Arg Gly Glu Pro Gly Asn Ile Gly Phe Pro Gly  
                   485                  490                  495  
 Pro Lys Gly Pro Thr Gly Asp Pro Gly Lys Asn Gly Asp Lys Gly His  
                   500                  505                  510  
 Ala Gly Leu Ala Gly Ala Arg Gly Ala Pro Gly Pro Asp Gly Asn Asn  
                   515                  520                  525  
 Gly Ala Gln Gly Pro Pro Gly Pro Gln Gly Val Gln Gly Gly Lys Gly  
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 Glu Gln Gly Pro Ala Gly Pro Pro Gly Phe Gln Gly Leu Pro Gly Pro  
                   545                  550                  555                  560  
 Ser Gly Pro Ala Gly Glu Val Gly Lys Pro Gly Glu Arg Gly Leu His  
                   565                  570                  575  
 Gly Glu Phe Gly Leu Pro Gly Pro Ala Gly Pro Arg Gly Glu Arg Gly  
                   580                  585                  590  
 Pro Pro Gly Glu Ser Gly Ala Ala Gly Pro Thr Gly Pro Ile Gly Ser  
                   595                  600                  605  
 Arg Gly Pro Ser Gly Pro Pro Gly Pro Asp Gly Asn Lys Gly Glu Pro  
                   610                  615                  620  
 Gly Val Val Gly Ala Val Gly Thr Ala Gly Pro Ser Gly Pro Ser Gly  
                   625                  630                  635                  640  
 Leu Pro Gly Glu Arg Gly Ala Ala Gly Ile Pro Gly Gly Lys Gly Glu  
                   645                  650                  655  
 Lys Gly Glu Pro Gly Leu Arg Gly Glu Ile Gly Asn Pro Gly Arg Asp  
                   660                  665                  670  
 Gly Ala Arg Gly Ala His Gly Ala Val Gly Ala Pro Gly Pro Ala Gly  
                   675                  680                  685  
 Ala Thr Gly Asp Arg Gly Glu Ala Gly Ala Ala Gly Pro Ala Gly Pro  
                   690                  695                  700  
 Ala Gly Pro Arg Gly Ser Pro Gly Glu Arg Gly Glu Val Gly Pro Ala  
                   705                  710                  715                  720  
 Gly Pro Asn Gly Phe Ala Gly Pro Ala Gly Ala Ala Gly Gln Pro Gly

	725	730	735
Ala Lys Gly Glu Arg Gly Ala Lys Gly Pro Lys Gly Glu Asn Gly Val			
740	745	750	
Val Gly Pro Thr Gly Pro Val Gly Ala Ala Gly Pro Ala Gly Pro Asn			
755	760	765	
Gly Pro Pro Gly Pro Ala Gly Ser Arg Gly Asp Gly Gly Pro Pro Gly			
770	775	780	
Met Thr Gly Phe Pro Gly Ala Ala Gly Arg Thr Gly Pro Pro Gly Pro			
785	790	795	800
Ser Gly Ile Ser Gly Pro Pro Gly Pro Pro Gly Pro Ala Gly Lys Glu			
805	810	815	
Gly Leu Arg Gly Pro Arg Gly Asp Gln Gly Pro Val Gly Arg Thr Gly			
820	825	830	
Glu Val Gly Ala Val Gly Pro Pro Gly Phe Ala Gly Glu Lys Gly Pro			
835	840	845	
Ser Gly Glu Ala Gly Thr Ala Gly Pro Pro Gly Thr Pro Gly Pro Gln			
850	855	860	
Gly Leu Leu Gly Ala Pro Gly Ile Leu Gly Leu Pro Gly Ser Arg Gly			
865	870	875	880
Glu Arg Gly Leu Pro Gly Val Ala Gly Ala Val Gly Glu Pro Gly Pro			
885	890	895	
Leu Gly Ile Ala Gly Pro Pro Gly Ala Arg Gly Pro Pro Gly Ala Val			
900	905	910	
Gly Ser Pro Gly Val Asn Gly Ala Pro Gly Glu Ala Gly Arg Asp Gly			
915	920	925	
Asn Pro Gly Asn Asp Gly Pro Pro Gly Arg Asp Gly Gln Pro Gly His			
930	935	940	
Lys Gly Glu Arg Gly Tyr Pro Gly Asn Ile Gly Pro Val Gly Ala Ala			
945	950	955	960
Gly Ala Pro Gly Pro His Gly Pro Val Gly Pro Ala Gly Lys His Gly			
965	970	975	
Asn Arg Gly Glu Thr Gly Pro Ser Gly Pro Val Gly Pro Ala Gly Ala			
980	985	990	
Val Gly Pro Arg Gly Pro Ser Gly Pro Gln Gly Ile Arg Gly Asp Lys			
995	1000	1005	
Gly Glu Pro Gly Glu Lys Gly Pro Arg Gly Leu Pro Gly Leu Lys Gly			
1010	1015	1020	
His Asn Gly Leu Gln Gly Leu Pro Gly Ile Ala Gly His His Gly Asp			
1025	1030	1035	1040
Gln Gly Ala Pro Gly Ser Val Gly Pro Ala Gly Pro Arg Gly Pro Ala			
1045	1050	1055	
Gly Pro Ser Gly Pro Ala Gly Lys Asp Gly Arg Thr Gly His Pro Gly			
1060	1065	1070	
Thr Val Gly Pro Ala Gly Ile Arg Gly Pro Gln Gly His Gln Gly Pro			
1075	1080	1085	
Ala Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Val Ser			
1090	1095	1100	
Gly Gly Gly Tyr Asp Phe Gly Tyr Asp Gly Asp Phe Tyr Arg Ala Asp			
1105	1110	1115	1120
Gln Pro Arg Ser Ala Pro Ser Leu Arg Pro Lys Asp Tyr Glu Val Asp			
1125	1130	1135	
Ala Thr Leu Lys Ser Leu Asn Asn Gln Ile Glu Thr Leu Leu Thr Pro			
1140	1145	1150	
Glu Gly Ser Arg Lys Asn Pro Ala Arg Thr Cys Arg Asp Leu Arg Leu			
1155	1160	1165	
Ser His Pro Glu Trp Ser Ser Gly Tyr Tyr Trp Ile Asp Pro Asn Gln			
1170	1175	1180	
Gly Cys Thr Met Asp Ala Ile Lys Val Tyr Cys Asp Phe Ser Thr Gly			
1185	1190	1195	1200
Glu Thr Cys Ile Arg Ala Gln Pro Glu Asn Ile Pro Ala Lys Asn Trp			
1205	1210	1215	

Tyr Arg Ser Ser Lys Asp Lys Lys His Val Trp Leu Gly Glu Thr Ile  
 1220 1225 1230  
 Asn Ala Gly Ser Gln Phe Glu Tyr Asn Val Glu Gly Val Thr Ser Lys  
 1235 1240 1245  
 Glu Met Ala Thr Gln Leu Ala Phe Met Arg Leu Leu Ala Asn Tyr Ala  
 1250 1255 1260  
 Ser Gln Asn Ile Thr Tyr His Cys Lys Asn Ser Ile Ala Tyr Met Asp  
 1265 1270 1275 1280  
 Glu Glu Thr Gly Asn Leu Lys Lys Ala Val Ile Leu Gln Gly Ser Asn  
 1285 1290 1295  
 Asp Val Glu Leu Val Ala Glu Gly Asn Ser Arg Phe Thr Tyr Thr Val  
 1300 1305 1310  
 Leu Val Asp Gly Cys Ser Lys Lys Thr Asn Glu Trp Gly Lys Thr Ile  
 1315 1320 1325  
 Ile Glu Tyr Lys Thr Asn Lys Pro Ser Arg Leu Pro Phe Leu Asp Ile  
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 Ala Pro Leu Asp Ile Gly Gly Ala Asp His Glu Phe Phe Val Asp Ile  
 1345 1350 1355 1360  
 Gly Pro Val Cys Phe Lys  
 1365

<210> 266  
 <211> 2028  
 <212> DNA  
 <213> Homo sapiens

<400> 266

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aaggacgcgt	gtagccgagt	gchgcaigtgg	cgggcacgcg	tggaggactt	ctacacggtg	300
gagactgtga	gctcgggac	tgactgccgc	tgctcctgt	ccgcacactcc	ctccctcttc	360
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ctggccctcc	agctgctgca	gaaggatgcc	gccggccccc	ctgcacacccc	tgccacggc	720
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agtgtgcaga	aaagcttgc	agacagaggc	ctcccaaaac	ctcccaagga	gaagctgctt	840
caggtggaga	agctgagaaa	ggagagcggc	aagggcagtt	tcctccagcc	cacagccaag	900
cccccgc	tggcccgagca	gcaggtgt	atccgggct	tcaccta	caaggcaggc	960
aagcaggagg	tgaccggaggc	ggtggcagac	aacacccctcc	agggcacttc	ctggctggag	1020
caactgccc	ccaaagggtga	gggcagggtcc	aactccgcag	agcccaactc	cgccagagcag	1080
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accgagccac	cttcagggtcc	agaagtctcc	agccaaaggca	gagaggcag	ctgtgagggc	1260
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tgcttctgg	tgtgcggcat	cctgtatgcc	gtggacacgt	acaaccagca	ggaaggccag	1860
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aacgagcacg	cctacaccac	ccagatcgac	tacaaccca	aggagcgggt	gctgtacgcc	1980
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<210> 267  
<211> 675  
<212> PRT  
<213> Homo sapiens

<400> 267  
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Ala Leu Lys Ala Thr His Cys Leu Ala Ala Thr His Trp Ser Pro Ser  
35 40 45  
Cys Pro Pro Gln Gln Val Phe Gly Asp Leu Asp Gln Val Arg Met Thr  
50 55 60  
Ser Glu Gly Ser Asp Cys Arg Cys Lys Cys Ile Met Arg Pro Leu Ser  
65 70 75 80  
Lys Asp Ala Cys Ser Arg Val Arg Ser Gly Arg Ala Arg Val Glu Asp  
85 90 95  
Phe Tyr Thr Val Glu Thr Val Ser Ser Gly Thr Asp Cys Arg Cys Ser  
100 105 110  
Cys Thr Ala Pro Pro Ser Ser Leu Asn Pro Cys Glu Asn Glu Trp Lys  
115 120 125  
Met Glu Lys Leu Lys Lys Gln Ala Pro Glu Leu Leu Lys Leu Gln Ser  
130 135 140  
Met Val Asp Leu Leu Glu Gly Thr Leu Tyr Ser Met Asp Leu Met Lys  
145 150 155 160  
Val His Ala Tyr Val His Lys Val Ala Ser Gln Met Asn Thr Leu Glu  
165 170 175  
Glu Ser Ile Lys Ala Asn Leu Ser Arg Glu Asn Glu Val Val Lys Asp  
180 185 190  
Ser Val Arg His Leu Ser Glu Gln Leu Arg His Tyr Glu Asn His Ser  
195 200 205  
Ala Ile Met Leu Gly Ile Lys Lys Glu Leu Ser Arg Leu Gly Leu Gln  
210 215 220  
Leu Leu Gln Lys Asp Ala Ala Ala Pro Ala Thr Pro Ala Thr Gly  
225 230 235 240  
Thr Gly Ser Lys Ala Gln Asp Thr Ala Arg Gly Lys Gly Lys Asp Ile  
245 250 255  
Ser Lys Tyr Gly Ser Val Gln Lys Ser Phe Ala Asp Arg Gly Leu Pro  
260 265 270  
Lys Pro Pro Lys Glu Lys Leu Leu Gln Val Glu Lys Leu Arg Lys Glu  
275 280 285  
Ser Gly Lys Gly Ser Phe Leu Gln Pro Thr Ala Lys Pro Arg Ala Leu  
290 295 300  
Ala Gln Gln Gln Ala Val Ile Arg Gly Phe Thr Tyr Tyr Lys Ala Gly  
305 310 315 320  
Lys Gln Glu Val Thr Glu Ala Val Ala Asp Asn Thr Leu Gln Gly Thr  
325 330 335  
Ser Trp Leu Glu Gln Leu Pro Pro Lys Val Glu Gly Arg Ser Asn Ser  
340 345 350  
Ala Glu Pro Asn Ser Ala Glu Gln Asp Glu Ala Glu Pro Arg Ser Ser  
355 360 365  
Glu Arg Val Asp Leu Ala Ser Gly Thr Pro Thr Ser Ile Pro Ala Thr  
370 375 380  
Thr Thr Thr Ala Thr Thr Pro Thr Pro Thr Thr Ser Leu Leu Pro  
385 390 395 400  
Thr Glu Pro Pro Ser Gly Pro Glu Val Ser Ser Gln Gly Arg Glu Ala  
405 410 415  
Ser Cys Glu Gly Thr Leu Arg Ala Val Asp Pro Pro Val Arg His His  
420 425 430

Ser Tyr Gly Arg His Glu Gly Ala Trp Met Lys Asp Pro Ala Ala Arg  
 435 440 445  
 Asp Asp Arg Ile Tyr Val Thr Asn Tyr Tyr Gly Asn Ser Leu Val  
 450 455 460  
 Glu Phe Arg Asn Leu Glu Asn Phe Lys Gln Gly Arg Trp Ser Asn Met  
 465 470 475 480  
 Tyr Lys Leu Pro Tyr Asn Trp Ile Gly Thr Gly His Val Val Tyr Gln  
 485 490 495  
 Gly Ala Phe Tyr Tyr Asn Arg Ala Phe Thr Lys Asn Ile Ile Lys Tyr  
 500 505 510  
 Asp Leu Arg Gln Arg Phe Val Ala Ser Trp Ala Leu Leu Pro Asp Val  
 515 520 525  
 Val Tyr Glu Asp Thr Thr Pro Trp Lys Trp Arg Gly His Ser Asp Ile  
 530 535 540  
 Asp Phe Ala Val Asp Glu Ser Gly Leu Trp Val Ile Tyr Pro Ala Val  
 545 550 555 560  
 Asp Asp Arg Asp Glu Ala Gln Pro Glu Val Ile Val Leu Ser Arg Leu  
 565 570 575  
 Asp Pro Gly Asp Leu Ser Val His Arg Glu Thr Thr Trp Lys Thr Arg  
 580 585 590  
 Leu Arg Arg Asn Ser Tyr Gly Asn Cys Phe Leu Val Cys Gly Ile Leu  
 595 600 605  
 Tyr Ala Val Asp Thr Tyr Asn Gln Gln Glu Gly Gln Val Ala Tyr Ala  
 610 615 620  
 Phe Asp Thr His Thr Gly Thr Asp Ala Arg Pro Gln Leu Pro Phe Leu  
 625 630 635 640  
 Asn Glu His Ala Tyr Thr Thr Gln Ile Asp Tyr Asn Pro Lys Glu Arg  
 645 650 655  
 Val Leu Tyr Ala Trp Asp Asn Gly His Gln Leu Thr Tyr Thr Leu His  
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 Phe Val Val  
 675

<210> 268  
 <211> 1909  
 <212> DNA  
 <213> Homo sapiens

<400> 268

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ctctgtacac	aagccatttc	aataggatgg	agctgttaat	tatttccaa	agagtaata	300
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gaagaaaagg	gagaagggaa	gaggtaaaa	agtaagtgt	cagacctatg	aacgtaatcc	600
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taaagaaaagg	ctttcccagc	atcacttaca	catccaaaaa	ctaaaaagat	caactcttcc	1140
aactgagaaa	agactcctgg	cttgaatgg	aaacttacag	cagagagtca	caggccacgg	1200
caacaacaac	gacaacaaca	aacatttgg	atattattct	caactcacgt	ttaataata	1260
catcttaatt	attttcttag	tagagaaact	acaatcagc	ctcttcaaca	tttatataca	1320

gtttaataag	cctcttgcaa	gttacttgtt	ctctcacctg	aggatttttt	ttcctccccca	1380
ccttgccccc	gttcctccct	tcctcttc	ccttgcaag	aggaaatatt	taacatattt	1440
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aggagaatga	agttagaagtg	aaaggtttat	aaatccattt	gtaaagcattt	atccccatata	1740
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tatgtgactc	atgtttctgg	ataaataaaag	caccaaaatat	gtatctgtaa	ccacaatcac	1860
acatattata	ttaaatatata	atctatataa	caaaaaaaaaa	aaaaaaaaaa		1909

<210> 269  
<211> 83  
<212> PRT  
<213> *Homo sapiens*

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<400> 269
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Ile Leu Tyr Cys Met Asn Tyr Ala Leu Ser Arg Ile Gln Cys Gln Gly
      20          25          30
Glu Leu Gly Glu Ile Asn Tyr Phe Asn Phe Phe Phe Ile Leu Tyr Lys
      35          40          45
Ala Met Asp Phe Ile Trp Leu Met Cys Ala Leu Tyr Thr Ser His Phe
      50          55          60
Asn Arg Met Glu Leu Leu Ile Ile Phe Gln Arg Val Ile Asp Met Gln
      65          70          75          80
Lys Phe Gln

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<210> 270  
<211> 1720  
<212> DNA  
<213> *Homo sapiens*

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tggtaaatat ctctgaacct gggcatgaaa cagagagatg tcctaactct ggttgagagg	240
aatcctcatt tttctgtgcc ctctcaactgt ggcatcctaa gaaaaaaagtt ttgggttcct	300
gcagcatgaa ggagagctct gctcccagaa ttgggagct ccagattct tcacgggtgt	360
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ggtggaaagg gctgagagtg tgggtgggg ccactctga gcaccatgt ggcacccact	480
gctggctctt gttgtggct gggcaactcg gaaaatgtt ttgggtctaa gataaaaaag	540
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gctggtgag tgatgccacc agcacagggg tatgagttt cagctccaa ggggccaagg	780
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gagggtgtgg agaatgcctg cttdctcctca gaggagcatg agaccattt ccagaaccct	960
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cggccgggtgg attatggctt tgtttccgc ctcgttttcc ttgtgagttgg gattcttctg	1140
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<210> 271  
<211> 256  
<212> PRT  
<213> Homo sapiens

<400> 271															
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								20		25			30		
Leu	Lys	Thr	Leu	Ser	Asn	Gly	Pro	Gln	Ala	Pro	Arg	Arg	Ser	Ala	Pro
								35		40			45		
Leu	Gly	Pro	Val	Ala	Pro	Thr	Arg	Glu	Gly	Val	Glu	Asn	Ala	Cys	Phe
								50		55			60		
Ser	Ser	Glu	Glu	His	Glu	Thr	His	Phe	Gln	Asn	Pro	Gly	Asn	Thr	Arg
								65		70		75		80	
Leu	Gly	Ser	Ser	Pro	Ser	Pro	Pro	Gly	Gly	Val	Ser	Ser	Leu	Pro	Arg
								85		90			95		
Ser	Gln	Arg	Asp	Asp	Leu	Ser	Leu	His	Ser	Glu	Glu	Gly	Pro	Ala	Leu
								100		105			110		
Glu	Pro	Val	Ser	Arg	Pro	Val	Asp	Tyr	Gly	Phe	Val	Ser	Ala	Leu	Val
								115		120			125		
Phe	Leu	Val	Ser	Gly	Ile	Leu	Leu	Val	Val	Thr	Ala	Tyr	Ala	Ile	Pro
								130		135			140		
Arg	Glu	Ala	Arg	Val	Asn	Pro	Asp	Thr	Val	Thr	Ala	Arg	Glu	Met	Glu
								145		150			155		160
Arg	Leu	Glu	Met	Tyr	Tyr	Ala	Arg	Leu	Gly	Ser	His	Leu	Asp	Arg	Cys
								165		170			175		
Ile	Ile	Ala	Gly	Leu	Gly	Leu	Leu	Thr	Val	Gly	Gly	Met	Leu	Ser	
								180		185			190		
Val	Leu	Leu	Met	Val	Ser	Leu	Cys	Lys	Gly	Leu	Tyr	Arg	Arg	Arg	
								195		200			205		
Thr	Phe	Val	Pro	Gly	Lys	Gly	Ser	Arg	Lys	Thr	Tyr	Gly	Ser	Ile	Asn
								210		215			220		
Leu	Arg	Met	Arg	Gln	Leu	Asn	Gly	Asp	Gly	Gly	Gln	Ala	Leu	Val	Glu
								225		230			235		240
Asn	Glu	Val	Val	Gln	Val	Ser	Glu	Thr	Ser	His	Thr	Leu	Gln	Arg	Ser
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<210> 272  
<211> 1111  
<212> DNA  
<213> Homo sapiens

<400> 272

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aggctctcaa	agatgcccag	gagaagctgg	agctggcaga	gaaaaaggcc	accgatgctg	300
aagccgacgt	agcttctctg	aacagacgca	tccagcttgt	tgagaaagag	ttggatcgat	360
cccaggagcg	tctggcaaca	gctttgcaga	agctggagga	agctgagaag	gcagcagatg	420
agagtggag	aggcatgaaa	gtcattgaga	gtcgagccca	aaaagatgaa	gaaaaaatgg	480
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cttccatata	agtttctttg	cttcacttct	cccaagactc	cctcgccgag	ctggatgtcc	960
cacctcttg	agctctgcat	ttgtctattc	tccagctgac	cctggttctc	tctcttagca	1020
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<210> 273  
<211> 284  
<212> PRT  
<213> *Homo sapiens*

<400> 273

Met	Asp	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glut
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					20				25				30		
Glu	Asp	Arg	Ser	Lys	Gln	Leu	Glu	Asp	Glu	Leu	Val	Ser	Leu	Gln	Lys
				35			40					45			
Lys	Leu	Lys	Gly	Thr	Glu	Asp	Glu	Leu	Asp	Lys	Tyr	Ser	Glu	Ala	Leu
					50		55			60					
Lys	Asp	Ala	Gln	Glu	Lys	Leu	Glu	Leu	Ala	Glu	Lys	Lys	Ala	Thr	Asp
					65		70			75			80		
Ala	Glu	Ala	Asp	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu
					85			90				95			
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys
					100			105				110			
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys
					115		120				125				
Val	Ile	Glu	Ser	Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile	Gln
					130		135				140				
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Asp	Ala	Asp	Arg
					145		150			155			160		
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Ser	Asp	Leu
					165			170				175			
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Gly	Lys	Cys	Ala	Glu
					180			185				190			
Leu	Glu	Glu	Glu	Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu
					195		200				205				
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Arg	Tyr	Glu	Glu	Glu
					210		215			220					
Ile	Lys	Val	Leu	Ser	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
					225		230			235			240		
Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu
					245			250				255			
Glu	Asp	Glu	Leu	Tyr	Ala	Gln	Lys	Leu	Lys	Tyr	Lys	Ala	Ile	Ser	Glu
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<210> 274  
<211> 2032  
<212> DNA  
<213> Homo sapiens

<400> 274

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gcgaccccgag aggacaagca ggacatttgac aagcagtacg tgggcttcgc cacactqccc
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gaccggaagc tgctcagtc tgaggagcgc atcagccaga cggtagagat	360
acgggtggaca ttgagggaaa gggagtcaag ctgaagctca ccacgtgga	420
ttcggggacg ctgtcaacaa caccgagtgc tggaaagcca tcaccgacta	480
cagtttgagc agtacttccg tgatgagagc ggcctaacc gaaagaacat	540
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gtggggttca tgaaggcatt gcatacagaag gtcaacatcg tgcctctat	660
gactgtcttgc tccccagtgta gatccggaag ctgaaggagc ggatccgg	720
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gtgggtggagg ccaaggggca gcgggtccgg ggccgactgt acccctggg	900
gtggggaaacc aggcgcattg cgacttcgtg aagctgcgc acatgctcat	960
atgcacgacc tcaaggacgt gacgtgcac gtgcactacg agaactaccg	1020
atccacgaga tgaccagcaa actgacccag gacagccgc tggagagccc	1080
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ctcccgatgt tcccacccgc atgatccctt cccgcccacac gatgctccgt	1980
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<210> 275  
 <211> 369  
 <212> PRT  
 <213> Homo sapiens

<400> 275

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 Gln Val His Arg Lys Ser Val Lys Lys Gly Phe Asp Phe Thr Leu Met  
 35 40 45  
 Val Ala Gly Glu Ser Gly Leu Gly Lys Ser Thr Leu Val His Ser Leu  
 50 55 60  
 Phe Leu Thr Asp Leu Tyr Lys Asp Arg Lys Leu Leu Ser Ala Glu Glu  
 65 70 75 80  
 Arg Ile Ser Gln Thr Val Glu Ile Leu Lys His Thr Val Asp Ile Glu  
 85 90 95  
 Glu Lys Gly Val Lys Leu Lys Leu Thr Ile Val Asp Thr Pro Gly Phe  
 100 105 110  
 Gly Asp Ala Val Asn Asn Thr Glu Cys Trp Lys Pro Ile Thr Asp Tyr  
 115 120 125  
 Val Asp Gln Gln Phe Glu Gln Tyr Phe Arg Asp Glu Ser Gly Leu Asn  
 130 135 140  
 Arg Lys Asn Ile Gln Asp Asn Arg Val His Cys Cys Leu Tyr Phe Ile  
 145 150 155 160  
 Ser Pro Phe Gly His Gly Leu Arg Pro Val Asp Val Gly Phe Met Lys  
 165 170 175  
 Ala Leu His Glu Lys Val Asn Ile Val Pro Leu Ile Ala Lys Ala Asp

180	185	190
Cys Leu Val Pro Ser Glu Ile Arg Lys Leu Lys Glu Arg Ile Arg Glu		
195	200	205
Glu Ile Asp Lys Phe Gly Ile His Val Tyr Gln Phe Pro Glu Cys Asp		
210	215	220
Ser Asp Glu Asp Glu Asp Phe Lys Gln Gln Asp Arg Glu Leu Lys Glu		
225	230	235
Ser Ala Pro Phe Ala Val Ile Gly Ser Asn Thr Val Val Glu Ala Lys		
245	250	255
Gly Gln Arg Val Arg Gly Arg Leu Tyr Pro Trp Gly Ile Val Glu Val		
260	265	270
Glu Asn Gln Ala His Cys Asp Phe Val Lys Leu Arg Asn Met Leu Ile		
275	280	285
Arg Thr His Met His Asp Leu Lys Asp Val Thr Cys Asp Val His Tyr		
290	295	300
Glu Asn Tyr Arg Ala His Cys Ile Gln Gln Met Thr Ser Lys Leu Thr		
305	310	315
Gln Asp Ser Arg Met Glu Ser Pro Ile Pro Ile Leu Pro Leu Pro Thr		
325	330	335
Pro Asp Ala Glu Thr Glu Lys Leu Ile Arg Met Lys Asp Glu Glu Leu		
340	345	350
Arg Arg Met Gln Glu Met Leu Gln Arg Met Lys Gln Gln Met Gln Asp		
355	360	365
Gln		

<210> 276  
 <211> 1344  
 <212> DNA  
 <213> Homo sapiens

<400> 276

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gggacagttc aagtcatctt tgtcctctac tttctgttgc actctcagcc ttgttcttctt	300
tttagaaaact gcatggtaac tattatatacg ctaaagaaga gcatctgtac ctctgccctg	360
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ccacccacat ccaacacccct ctgagccctc gaagctccca ccaggccagc tctccctcca	900
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tgacccagaa ggggtggcga aggacacagct cagagacata aagagaagat gccaaggccc	1260
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aattaaagac cactcatgtt ctcc	1344

<210> 277  
 <211> 93  
 <212> PRT  
 <213> Homo sapiens

<400> 277  
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 Ala Leu Gly Thr Lys Thr Glu Ser Ser Ser Arg Gly Pro Tyr His Pro  
 20 25 30  
 Ser Glu Cys Cys Phe Thr Tyr Thr Tyr Lys Ile Pro Arg Gln Arg  
 35 40 45  
 Ile Met Asp Tyr Tyr Glu Thr Asn Ser Gln Cys Ser Lys Pro Gly Ile  
 50 55 60  
 Val Phe Ile Thr Lys Arg Gly His Ser Val Cys Thr Asn Pro Ser Asp  
 65 70 75 80  
 Lys Trp Val Gln Asp Tyr Ile Lys Asp Met Lys Glu Asn  
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<210> 278

<211> 1344

<212> DNA

<213> Homo sapiens

<400> 278

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tagtccccca ctccttatctc aggcttagag gattagatta atccctggg gggaaagactc	180
ttccctgtaaa cattttttt tatctgcctg tagtatttg gataattcg gaaatccaca	240
gggacagttc aagtcatctc tgcctctac ttctgttgc actctcagcc ttgttcttt	300
tttagaaact gcatggtaac tattatata gtaaagaaga gcattctgac ctgtgccctg	360
ggacttcctg gatcctcctc ttcttataaa tacaaggcca gagctggat cccggggagc	420
caggaagcag tgagcccagg agtctcggc cagccctgccc tgccaccag gaggatgaag	480
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gttctgaaca gctttcaccc tgctgcgtac tgctgcacct cctacatctc acaaaggcatc	660
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ccaaacagccca gtgctccaag cccggaatttgc tcttcatcac caaaaggccc cattccgtct	1140
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tgacccagaa ggggtggcga aggacacagct cagagacata aagagaagat gccaaggccc	1260
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<210> 279

<211> 93

<212> PRT

<213> Homo sapiens

<400> 279

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20 25 30	
Ser Glu Cys Cys Phe Thr Tyr Thr Tyr Lys Ile Pro Arg Gln Arg	
35 40 45	
Ile Met Asp Tyr Tyr Glu Thr Asn Ser Gln Cys Ser Lys Pro Gly Ile	
50 55 60	
Val Phe Ile Thr Lys Arg Gly His Ser Val Cys Thr Asn Pro Ser Asp	
65 70 75 80	
Lys Trp Val Gln Asp Tyr Ile Lys Asp Met Lys Glu Asn	

<210> 280  
 <211> 1344  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 280

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tagtccccca	ctcctatctc	aggcttagag	gattagatta	atccctgga	ggaaagactc	180
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gggacagttc	aagtcattt	tgtcctctac	tttctgttc	actctcagcc	ttgttcttt	300
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gtaccaaccc	cagtgacaag	tgggtccagg	actatatcaa	ggacatgaag	gagaactgag	1200
tgacccagaa	gggggtggcga	aggcacagct	cagagacata	aagagaagat	gccaaggccc	1260
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aattaaagac	cactcatgt	cttc				1344

<210> 281  
 <211> 93  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 281

Met	Lys	Ile	Ser	Val	Ala	Ala	Ile	Pro	Phe	Phe	Leu	Leu	Ile	Thr	Ile
1				5					10					15	
Ala	Leu	Gly	Thr	Lys	Thr	Glu	Ser	Ser	Ser	Arg	Gly	Pro	Tyr	His	Pro
				20				25				30			
Ser	Glu	Cys	Phe	Thr	Tyr	Thr	Tyr	Tyr	Lys	Ile	Pro	Arg	Gln	Arg	
				35				40			45				
Ile	Met	Asp	Tyr	Tyr	Glu	Thr	Asn	Ser	Gln	Cys	Ser	Lys	Pro	Gly	Ile
	50				55					60					
Val	Phe	Ile	Thr	Lys	Arg	Gly	His	Ser	Val	Cys	Thr	Asn	Pro	Ser	Asp
65					70				75			80			
Lys	Trp	Val	Gln	Asp	Tyr	Ile	Lys	Asp	Met	Lys	Glu	Asn			
				85					90						

<210> 282  
 <211> 2750  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 282

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gagagaaaaac	agttaaataa	aaactaattt	aatacaaata	ttagctggc	ttgggtggc	180
atgcctgtaa	tcccagctac	tcgggaggct	gaagcaggag	agttgctga	acctgggagg	240

cgttagattgc	agttagccaa	gatcatccca	ctgactcca	gcctggcga	cagagtgaga	300
cacagtctca	aacaaaacaa	aacaaaaagg	aatttagagt	agccatggg	gtagctatgc	360
ttaccaaata	ccagtggat	ccccgtggat	tctccctacc	ccttttaag	aggatttttg	420
ctacccctta	gggctccgtt	tacagggatc	actgatttct	cagtcacgaa	gaacaaaatt	480
atccagctt	gcttggaccc	gaccactaca	gtccagaagg	attgcttgc	agcggaaatg	540
gaggataaag	tttaactgt	ggtcaagggtt	ttaaatggca	tctgtgacaa	aacaatccga	600
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tcaccctccac	ccgcgacacaa	ccagccccct	gaaagacta	tggatcacctc	actgaagaag	1020
gagaagtcc	ccatcctgca	tcttattatt	cctcctccgc	ctgctgttcc	ctactctccc	1080
cgggatgaga	atggcagtt	tgttatgg	gggtccagta	agtcaaaaca	accattgcct	1140
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gcggactaca	tccgaggaag	caggtctac	atcaactcag	atctccacag	cagcgcacg	1560
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gacgttatgg	tcattgtgag	ggactgggtg	cattgttct	ttttgagggg	ctggggggac	2040
tcaaattgg	ggctgtttc	acacagatgt	gttggttgt	ggtccaactt	ctttatctga	2100
aaaagccagt	gagaaaacat	ttttgattt	attttctaa	actatctacc	atattttaa	2160
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tcagttggta	cagaaataca	tgaacacatt	ttgatagggc	ttatttcaca	caaagaagtt	2340
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tgaaagatac	atgatgttc	atttgacct	gttcagtg	tgtcttccag	cacgggtgt	2520
acactcttc	aaaattgtac	acagtttgc	aatttagaaat	atcttggaaa	gcctcatgt	2580
cactaatttt	caactagcat	caggttattt	gaaaacgtgt	gtctggat	taactcttgc	2640
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<210> 283

<211> 380

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (1)...(380)

<223> Xaa = Any Amino Acid

<400> 283

Met	Glu	Asp	Lys	Val	Leu	Thr	Val	Val	Lys	Val	Leu	Asn	Gly	Ile	Cys
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Asp	Lys	Thr	Ile	Arg	Ser	Thr	Thr	Asp	Pro	Val	Met	Ser	Gln	Cys	Ala
				20				25					30		
Cys	Leu	Glu	Val	His	Leu	Pro	Asn	Ile	Lys	Pro	Gly	Glu	Gly	Leu	
				35				40				45			
Gly	Met	Tyr	Ile	Lys	Ser	Thr	Tyr	Asp	Gly	Leu	His	Val	Ile	Thr	Gly

50	55	60													
Thr	Thr	Glu	Asn	Ser	Pro	Ala	Asp	Arg	Ser	Gln	Lys	Ile	His	Ala	Gly
65		70				75									80
Asp	Glu	Val	Ile	Gln	Val	Asn	Gln	Gln	Thr	Val	Val	Gly	Trp	Gln	Leu
															95
85						90									
Lys	Asn	Leu	Val	Lys	Lys	Leu	Arg	Glu	Asn	Pro	Thr	Gly	Val	Val	Leu
															110
100						105									
Leu	Leu	Lys	Lys	Arg	Pro	Thr	Gly	Ser	Phe	Asn	Phe	Thr	Pro	Ala	Pro
															125
115						120									
Leu	Lys	Asn	Leu	Arg	Trp	Lys	Pro	Pro	Leu	Val	Gln	Thr	Ser	Pro	Pro
															140
130						135									
Pro	Ala	Thr	Thr	Gln	Ser	Pro	Glu	Ser	Thr	Met	Asp	Thr	Ser	Leu	Lys
145							150				155				160
Lys	Glu	Lys	Ser	Ala	Ile	Leu	Asp	Leu	Tyr	Ile	Pro	Pro	Pro	Pro	Ala
															175
165										170					
Val	Pro	Tyr	Ser	Pro	Arg	Asp	Glu	Asn	Gly	Ser	Phe	Val	Tyr	Gly	Gly
															190
180										185					
Ser	Ser	Lys	Cys	Lys	Gln	Pro	Leu	Pro	Gly	Pro	Lys	Gly	Ser	Glu	Ser
															205
195										200					
Pro	Asn	Ser	Phe	Leu	Asp	Gln	Glu	Ser	Arg	Arg	Arg	Arg	Phe	Thr	Ile
															220
210							215								
Ala	Asp	Ser	Asp	Gln	Leu	Pro	Gly	Tyr	Ser	Val	Glu	Thr	Asn	Ile	Leu
											235				240
225							230								
Pro	Thr	Lys	Met	Arg	Glu	Lys	Thr	Pro	Ser	Tyr	Xaa	Lys	Pro	Arg	Pro
										245					255
											250				
Leu	Ser	Met	Pro	Ala	Asp	Gly	Asn	Trp	Met	Gly	Ile	Val	Asp	Pro	Phe
									260		265				270
Ala	Arg	Pro	Arg	Gly	His	Gly	Arg	Lys	Gly	Glu	Asp	Ala	Leu	Cys	Arg
								275		280					285
Tyr	Phe	Ser	Asn	Glu	Arg	Ile	Pro	Pro	Ile	Ile	Glu	Glu	Ser	Ser	Ser
								290		295					300
Pro	Pro	Tyr	Arg	Phe	Ser	Arg	Pro	Thr	Thr	Glu	Arg	His	Leu	Val	Arg
								305		310		315			320
Gly	Ala	Asp	Tyr	Ile	Arg	Gly	Ser	Arg	Cys	Tyr	Ile	Asn	Ser	Asp	Leu
								325		330					335
His	Ser	Ser	Ala	Thr	Ile	Pro	Phe	Gln	Glu	Gly	Thr	Lys	Lys	Lys	
								340		345					350
Ser	Gly	Ser	Ser	Ala	Thr	Lys	Ser	Ser	Ser	Thr	Glu	Pro	Ser	Leu	Leu
								355		360					365
Val	Ser	Trp	Phe	Thr	Arg	Leu	Lys	Leu	Leu	Leu	Thr	His			
								370		375					380

<210> 284

<211> 1789

<212> DNA

<213> Homo sapiens

<400> 284

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tcctcattgg	ctgatggatc	ccaaggggct	cctctccttg	accttcgtgc	tgtttctctc	180
cctggctttt	ggggcaagct	acggaacagg	tgggcgcatg	atgaactgccc	caaagattct	240
ccggcagttg	ggaagcaaaag	tgctgctgcc	cctgacatata	gaaaggataa	ataagagcat	300
gaacaaaaggc	atcccacatgg	tcgtcacaat	ggcaaaaatca	ctggagaaca	gtgtcgagaa	360
caaaaatgtg	tctcttgatc	catccgaagg	aggcccctcca	cgtttatctag	gagatcgcta	420
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gctttatgag	caggtctcca	ctccagaaat	taaagttta	aacaagaccc	aggagaacgg	600
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gagttaaaag	gccccggcacc	acccactgaa	cccagccaa	agctcccacc	tcctgtccct	720
caccctcgcc	ccccagcatg	ctgacaatat	ctacatctgc	accgtgagca	acccttatcag	780

caacaattcc	cagacacctca	gcccgtggcc	cggatgcagg	acagaccctt	cagaacacaa	840
accatgggca	gtgtatgtcg	ggctgttagg	gggtgtcattc	atgattctca	tcatgggtgt	900
aatactacag	ttgagaagaa	gaggtaaaac	gaaccattac	cagacaacag	tggaaaaaaa	960
aagccttacg	atctatgccc	aagtccagaa	accaggctt	cttcagaaga	aacttgactc	1020
cttcccagct	caggaccctt	gcaccacat	atatgttgc	gccacagagc	ctgtccccaga	1080
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aacttggcca	caggeccaat	tttctctgg	cagacatgt	gcacgtctgt	acccttctca	1260
gatoaactcc	ctggtgatgt	ttcttccaca	tacatgttgc	aatgaacaa	ggaagtggagg	1320
cttcccaaga	atttagcttgc	ctgtgcagtg	gctgcaggcg	cagaacagag	cgttacttga	1380
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tgcctcagtt	tctctctcag	gataaaagagt	gaatagaggc	cgaagggtga	atttcttatt	1680
atacataaaaa	cactctgata	ttattgtata	aaggaagcta	agaatattat	tttatttgca	1740
aaacccagaa	gctaaaaagt	caataaacag	aaagaatgtat	tttgagaaaa		1789

<210> 285

<211> 335

<212> PRT

<213> Homo sapiens

<400> 285

Met	Asp	Pro	Lys	Gly	Leu	Leu	Ser	Leu	Thr	Phe	Val	Leu	Phe	Leu	Ser
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Leu	Ala	Phe	Gly	Ala	Ser	Tyr	Gly	Thr	Gly	Gly	Arg	Met	Met	Asn	Cys
						20			25					30	
Pro	Lys	Ile	Leu	Arg	Gln	Leu	Gly	Ser	Lys	Val	Leu	Leu	Pro	Leu	Thr
						35			40					45	
Tyr	Glu	Arg	Ile	Asn	Lys	Ser	Met	Asn	Lys	Ser	Ile	His	Ile	Val	Val
						50			55					60	
Thr	Met	Ala	Lys	Ser	Leu	Glu	Asn	Ser	Val	Glu	Asn	Lys	Ile	Val	Ser
						65			70					80	
Leu	Asp	Pro	Ser	Glu	Ala	Gly	Pro	Pro	Arg	Tyr	Leu	Gly	Asp	Arg	Tyr
						85			90					95	
Lys	Phe	Tyr	Leu	Glu	Asn	Leu	Thr	Leu	Gly	Ile	Arg	Glu	Ser	Arg	Lys
						100			105					110	
Glu	Asp	Glu	Gly	Trp	Tyr	Leu	Met	Thr	Leu	Glu	Lys	Asn	Val	Ser	Val
						115			120					125	
Gln	Arg	Phe	Cys	Leu	Gln	Leu	Arg	Leu	Tyr	Glu	Gln	Val	Ser	Thr	Pro
						130			135					140	
Glu	Ile	Lys	Val	Leu	Asn	Lys	Thr	Gln	Glu	Asn	Gly	Thr	Cys	Thr	Leu
						145			150					160	
Ile	Leu	Gly	Cys	Thr	Val	Glu	Lys	Gly	Asp	His	Val	Ala	Tyr	Ser	Trp
						165			170					175	
Ser	Glu	Lys	Ala	Gly	Thr	His	Pro	Leu	Asn	Pro	Ala	Asn	Ser	Ser	His
						180			185					190	
Leu	Leu	Ser	Leu	Thr	Leu	Gly	Pro	Gln	His	Ala	Asp	Asn	Ile	Tyr	Ile
						195			200					205	
Cys	Thr	Val	Ser	Asn	Pro	Ile	Ser	Asn	Asn	Ser	Gln	Thr	Phe	Ser	Pro
						210			215					220	
Trp	Pro	Gly	Cys	Arg	Thr	Asp	Pro	Ser	Glu	Thr	Lys	Pro	Trp	Ala	Val
						225			230					240	
Tyr	Ala	Gly	Leu	Leu	Gly	Gly	Val	Ile	Met	Ile	Leu	Ile	Met	Val	Val
						245			250					255	
Ile	Leu	Gln	Leu	Arg	Arg	Arg	Gly	Lys	Thr	Asn	His	Tyr	Gln	Thr	Thr
						260			265					270	
Val	Glu	Lys	Lys	Ser	Leu	Thr	Ile	Tyr	Ala	Gln	Val	Gln	Lys	Pro	Gly
						275			280					285	
Pro	Leu	Gln	Lys	Lys	Leu	Asp	Ser	Phe	Pro	Ala	Gln	Asp	Pro	Cys	Thr

290                    295                    300  
Thr Ile Tyr Val Ala Ala Thr Glu Pro Val Pro Glu Ser Val Gln Glu  
305                    310                    315                    320  
Thr Asn Ser Ile Thr Val Tyr Ala Ser Val Thr Leu Pro Glu Ser  
                      325                    330                    335

<210> 286  
<211> 305  
<212> PRT  
<213> Homo sapiens

<400> 286

Met Asp Pro Lys Gly Leu Leu Ser Leu Thr Phe Val Leu Phe Leu Ser  
1                    5                    10                    15  
Leu Ala Phe Gly Ala Ser Tyr Gly Thr Gly Gly Arg Met Met Asn Cys  
20                    25                    30  
Pro Lys Ile Leu Arg Gln Leu Gly Ser Lys Val Leu Leu Pro Leu Thr  
35                    40                    45  
Tyr Glu Arg Ile Asn Lys Ser Met Asn Lys Ser Ile His Ile Val Val  
50                    55                    60  
Thr Met Ala Lys Ser Leu Glu Asn Ser Val Glu Asn Lys Ile Val Ser  
65                    70                    75                    80  
Leu Asp Pro Ser Glu Ala Gly Pro Pro Arg Tyr Leu Gly Asp Arg Tyr  
85                    90                    95  
Lys Phe Tyr Leu Glu Asn Leu Thr Leu Gly Ile Arg Glu Ser Arg Lys  
100                  105                  110  
Glu Asp Glu Gly Trp Tyr Leu Met Thr Leu Glu Lys Asn Val Ser Val  
115                  120                  125  
Gln Arg Phe Cys Leu Gln Leu Arg Leu Tyr Glu Gln Val Ser Thr Pro  
130                  135                  140  
Glu Ile Lys Val Leu Asn Lys Thr Gln Glu Asn Gly Thr Cys Thr Leu  
145                  150                  155                  160  
Ile Leu Gly Cys Thr Val Glu Lys Gly Asp His Val Ala Tyr Ser Trp  
165                  170                  175  
Ser Glu Lys Ala Gly Thr His Pro Leu Asn Pro Ala Asn Ser Ser His  
180                  185                  190  
Leu Leu Ser Leu Thr Leu Gly Pro Gln His Ala Asp Asn Ile Tyr Ile  
195                  200                  205  
Cys Thr Val Ser Asn Pro Ile Ser Asn Asn Ser Gln Thr Phe Ser Pro  
210                  215                  220  
Trp Pro Gly Cys Arg Thr Asp Pro Ser Gly Lys Thr Asn His Tyr Gln  
225                  230                  235                  240  
Thr Thr Val Glu Lys Lys Ser Leu Thr Ile Tyr Ala Gln Val Gln Lys  
245                  250                  255  
Pro Gly Pro Leu Gln Lys Lys Leu Asp Ser Phe Pro Ala Gln Asp Pro  
260                  265                  270  
Cys Thr Thr Ile Tyr Val Ala Ala Thr Glu Pro Val Pro Glu Ser Val  
275                  280                  285  
Gln Glu Thr Asn Ser Ile Thr Val Tyr Ala Ser Val Thr Leu Pro Glu  
290                  295                  300  
Ser  
305

<210> 287  
<211> 298  
<212> PRT  
<213> Homo sapiens

<400> 287

Met Asp Pro Lys Gly Leu Leu Ser Leu Thr Phe Val Leu Phe Leu Ser  
1                    5                    10                    15

Leu Ala Phe Gly Ala Ser Tyr Gly Thr Gly Gly Arg Met Met Asn Cys  
     20                       25                       30  
 Pro Lys Ile Leu Arg Gln Leu Gly Ser Lys Val Leu Leu Pro Leu Thr  
     35                       40                       45  
 Tyr Glu Arg Ile Asn Lys Ser Met Asn Lys Ser Ile His Ile Val Val  
     50                       55                       60  
 Thr Met Ala Lys Ser Leu Glu Asn Ser Val Glu Asn Lys Ile Val Ser  
     65                       70                       75                       80  
 Leu Asp Pro Ser Glu Ala Gly Pro Pro Arg Tyr Leu Gly Asp Arg Tyr  
     85                       90                       95  
 Lys Phe Tyr Leu Glu Asn Leu Thr Leu Gly Ile Arg Glu Ser Arg Lys  
     100                       105                       110  
 Glu Asp Glu Gly Trp Tyr Leu Met Thr Leu Glu Lys Asn Val Ser Val  
     115                       120                       125  
 Gln Arg Phe Cys Leu Gln Leu Arg Leu Tyr Glu Gln Val Ser Thr Pro  
     130                       135                       140  
 Glu Ile Lys Val Leu Asn Lys Thr Gln Glu Asn Gly Thr Cys Thr Leu  
     145                       150                       155                       160  
 Ile Leu Gly Cys Thr Val Glu Lys Gly Asp His Val Ala Tyr Ser Trp  
     165                       170                       175  
 Ser Glu Lys Ala Gly Thr His Pro Leu Asn Pro Ala Asn Ser Ser His  
     180                       185                       190  
 Leu Leu Ser Leu Thr Leu Gly Pro Gln His Ala Asp Asn Ile Tyr Ile  
     195                       200                       205  
 Cys Thr Val Ser Asn Pro Ile Ser Asn Asn Ser Gln Thr Phe Ser Pro  
     210                       215                       220  
 Trp Pro Gly Cys Arg Thr Asp Pro Ser Glu Thr Lys Pro Trp Ala Val  
     225                       230                       235                       240  
 Tyr Ala Gly Leu Leu Gly Gly Val Ile Met Ile Leu Ile Met Val Val  
     245                       250                       255  
 Ile Leu Gln Leu Arg Arg Arg Gly Lys Thr Asn His Tyr Gln Thr Thr  
     260                       265                       270  
 Val Glu Lys Ser Leu Thr Ile Tyr Ala Gln Val Gln Lys Pro Gly  
     275                       280                       285  
 Asp Thr His His Gln Thr Ser Asp Leu Phe  
     290                       295

<210> 288  
 <211> 3640  
 <212> DNA  
 <213> Homo sapiens

<400> 288

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gccccgagcc	ccgggcttagc	ggcagacgag	cccgccaggc	cgctccgcgg	ggcagcgcag	180
ccaggccggc	tatggtcccg	gggctccgc	cccccccaag	gtgcccggga	cccgccaggc	240
cggtcgcga	gggtcacccc	acctcccg	gccccccgg	ccccctggctc	ccagctgcgg	300
gcgaccgctg	accgagcccg	gccccccagg	aggaggaaga	aaccagggcc	ccgttccctc	360
ccgaggacgg	ccgcgtttca	tcccgccagcc	cagaggtctc	ggctccctcc	ggcacccgccc	420
ccggccggct	gctcccggt	cctcccgcc	atggggagct	gccccggct	gctgctgctc	480
tggggctgca	cggtggtgcc	cgcaggactg	agtggagtag	ctggagtgag	ttcccgctgt	540
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<212> PRT  
<213> *Homo sapiens*

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Ala Asp Thr Thr Cys Gly Gln Asn Ala Thr Glu Leu Tyr Cys Phe Tyr
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Ser Glu Asn Thr Asp Leu Thr Cys Arg Gln Pro Lys Cys Asp Lys Cys
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Asn Ala Ala Tyr Pro His Leu Ala His Leu Pro Ser Ala Met Ala Asp

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 <212> DNA  
 <213> Mouse

<400> 290

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<212> PRT  
<213> Mouse

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Arg Ala Cys Arg Glu Leu Gly Asn Leu Ala Thr Pro Arg Thr Pro  
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Ala Phe Thr Asn Trp Ala Gln Pro Ala Thr Glu Gly Pro Cys Pro Ala  
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Ala Val Tyr Thr Pro Phe Asn Leu Val Ser Ser Glu Phe Glu Trp  
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Ala Ser Leu Leu Cys Val Lys Gln Pro Ser Gly Gly Val Gly Trp Ser  
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Gln Thr Gly Pro Leu Cys Pro Gly Thr Gly Cys Gly Pro Asp Asn Gly  
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Lys	Pro Gly Ile Thr Ser Ala Thr His Pro Ala Arg Ser	Pro Pro Tyr
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Gln	Pro Pro Ile Ile Ser Thr Asn Tyr Pro Gln Val	Phe Pro Pro His
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Gln	Ala Pro Met Ser Pro Asp Thr His Thr Ile Thr Tyr	Leu Pro Pro
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Val	Pro Pro His Leu Asp Pro Gly Asp Thr Thr Ser Lys	Ala His Gln
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His	Pro Leu Leu Pro Asp Ala Pro Gly Ile Arg Thr Gln	Ala Pro Gln
	580	585
Leu	Ser Val Ser Ala Leu Gln Pro Pro Leu Pro Thr Asn	Ser Arg Ser
	595	600
Ser	Val His Glu Thr Pro Val Pro Ala Ala Asn Gln	Pro Pro Ala Phe
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Ile	Ser Pro Thr His Ser Tyr Ser Arg Ala Pro Leu Val	Pro Arg Glu
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Thr	Ala Ala Pro Thr Ala Leu Ala Glu Ser Gly Leu Ala	Gly Gln Ser
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 <212> DNA  
 <213> Mouse

<400> 292

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<400> 293

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 Thr Pro Thr Ile Glu Asp Phe His Arg Lys Val Tyr Asn Ile His Gly  
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 Pro Ala Met Arg Arg Leu Ser Ile Leu Thr Gly Asp Val Phe Ile Leu  
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 Val Phe Ser Leu Asp Ser Arg Glu Ser Phe Asp Glu Val Lys Arg Leu  
 100 105 110  
 Gln Lys Gln Ile Leu Glu Val Lys Ser Cys Leu Lys Asn Lys Thr Lys  
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 Glu Ala Ala Glu Leu Pro Met Val Ile Cys Gly Asn Lys Asn Asp His  
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Ser Glu Leu Cys Arg Gln Val Pro Ala Met Glu Ala Glu Leu Leu Val  
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 Ser Gly Asp Glu Asn Cys Ala Tyr Phe Glu Val Ser Ala Lys Lys Asn  
 165 170 175  
 Thr Asn Val Asn Glu Met Phe Tyr Val Leu Phe Ser Met Ala Lys Leu  
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 Pro His Glu Met Ser Pro Ala Leu His His Lys Ile Ser Val Gln Tyr  
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 Gly Asp Ala Phe His Pro Arg Pro Phe Cys Met Arg Arg Thr Lys Val  
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 Ala Gly Ala Tyr Gly Met Val Ser Pro Phe Ala Arg Arg Pro Ser Val  
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<400> 294

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 <212> PRT

<213> Mouse

<400> 295

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Gly Gly Ala His Asn Pro Ala Arg Arg Arg Val Val Cys Gly Gly Gly  
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Thr Leu Leu Leu Ser Asn Asn Lys Ile Thr Gly Leu Arg Asn Gly Ser  
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Phe Leu Gly Leu Ser Leu Leu Glu Lys Leu Asp Leu Arg Ser Asn Val  
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Tyr Ser Ser Leu Gln Pro Gly Val Phe Asp Glu Leu Pro Ala Leu Lys  
165 170 175  
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Thr Leu Cys Ala Tyr Pro Ser Ala Leu His Ala His Ala Leu Ser Ser  
210 215 220  
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225 230 235 240  
His Tyr Leu Ile Pro Ser Leu Arg Gln Val Val Phe Gln Gly Asp Arg  
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Leu Pro Phe Gln Cys Ser Ala Ser Tyr Leu Gly Asn Asp Thr Arg Ile  
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His Trp Tyr His Asn Gly Ala Pro Met Glu Ser Asp Glu Gln Ala Gly  
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Ser Phe Ser Asp Met Met Asp Val Val Tyr Val Ala Gln Met Ile Gln  
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Lys Phe Leu Gly Tyr Val Asp Gln Ile Lys Glu Leu Val Glu Val Met  
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Gly	Ser	Thr	Arg
Leu	Arg	Leu	Arg
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Ser	Leu	Leu	Ala
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Ser	Leu	Leu	Ala
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Glu	Asp	Gly	Asp
995	1000	1005	
Leu	Gly	Ala	Leu
Met	Thr	Thr	His
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Ser	Cys	Leu	Tyr
Gly	Val	Ala	Ala
Ser	Ala	Ser	Ala
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Cys	Ala	Arg	Arg
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Ala	Ser	Leu	Lys
Ser	Ser	Pro	Ser
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Leu	Thr	Asn	Leu
1125	1130	1135	
Glu	Ala	Ser	Val
1140	1145	1150	
Ser	Arg	Gly	Ser
Leu	Ala	Pro	Arg
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Lys	Ser	Arg	Ala
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Arg	Leu	Lys	Ala
1185	1190	1195	1200
Ala	Pro	Glu	Leu
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Ser	Asp	Ser	Tyr
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Pro	Leu	Glu	Gly
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Ser	Ala	Ala	Pro
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Ala	Ser	Arg	Asp
1265	1270	1275	1280
Ser	Lys	Arg	Arg
Ser	Tyr	Pro	Leu
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Val			

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<212> DNA  
<213> Mouse

<400> 296

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<211> 500

<212> PRT

<213> Mouse

<400> 297

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Ala Val Ala Asn Arg Ser His Val Lys Ile His Arg Ile Leu Ser Ser		
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Ser His Arg Gln Ala Ser Arg Val Val Leu Ser Phe Asp Phe Pro Phe		
130	135	140
Tyr Gly His Pro Leu Arg Gln Ile Thr Ile Ala Thr Gly Gly Phe Ile		
145	150	155
Phe Met Gly Asp Met Leu His Arg Met Leu Thr Ala Thr Gln Tyr Val		
165	170	175
Ala Pro Leu Met Ala Asn Phe Asn Pro Gly Tyr Ser Asp Asn Ser Thr		
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Val Ala Tyr Phe Asp Asn Gly Thr Val Phe Val Val Gln Trp Asp His		
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Val Tyr Leu Gln Asp Arg Glu Asp Arg Gly Ser Phe Thr Phe Gln Ala		
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Ala Leu His Arg Asp Gly Arg Ile Val Phe Gly Tyr Lys Glu Ile Pro		
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Met Ala Val Leu Asp Ile Ser Ser Ala Gln His Pro Val Lys Ala Gly		
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Leu Ser Asp Ala Phe Met Ile Leu Asn Ser Ser Pro Glu Val Pro Glu		
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Ser Gln Arg Arg Thr Ile Phe Glu Tyr His Arg Val Glu Leu Asp Ser		
275	280	285
Ser Lys Ile Thr Thr Ser Ala Val Glu Phe Thr Pro Leu Pro Thr		
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Cys Leu Gln His Gln Ser Cys Asp Thr Cys Val Ser Ser Asn Leu Thr		
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Phe Asn Cys Ser Trp Cys His Val Leu Gln Arg Cys Ser Ser Gly Phe		
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Asp Arg Tyr Arg Gln Glu Trp Leu Thr Tyr Gly Cys Ala Gln Glu Ala		
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Glu Gly Lys Thr Cys Glu Asp Phe Gln Asp Asp Ser His Tyr Ser Ala		
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Ser Pro Asp Ser Ser Phe Ser Pro Phe Asn Gly Asp Ser Thr Thr Ser		
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Ser Ser Leu Phe Ile Asp Ser Leu Thr Thr Glu Asp Asp Thr Lys Leu		
385	390	395
Asn Pro Tyr Ala Glu Gly Asp Gly Leu Pro Asp His Ser Ser Pro Lys		
405	410	415
Ser Lys Gly Pro Pro Val His Leu Gly Thr Ile Val Gly Ile Val Leu		
420	425	430
Ala Val Leu Val Ala Ala Ile Ile Leu Ala Gly Ile Tyr Ile Ser		
435	440	445
Gly His Pro Asn Ser Asn Ala Ala Leu Phe Phe Ile Glu Arg Arg Pro		
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His His Trp Pro Ala Met Lys Phe His Asn His Pro Asn His Ser Thr		
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<210> 298

<211> 2010

<212> DNA

<213> Mouse

<400> 298

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<400> 299

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 35 40 45  
 Trp Asn Glu Glu Gly Val Glu Val Asp Ser Gln Ala Tyr Asn His Arg  
 50 55 60  
 Trp Lys Arg Asn Val Asp Pro Phe Lys Ala Val Asp Thr Asn Arg Ala  
 65 70 75 80  
 Ser Met Gly Gln Ala Ser Pro Glu Ser Lys Gly Phe Thr Asp Leu Leu  
 85 90 95  
 Leu Asp Asp Gly Gln Asp Asn Asn Thr Gln Ile Glu Glu Asp Thr Asp  
 100 105 110  
 His Asn Tyr Tyr Ile Ser Arg Ile Tyr Gly Pro Ala Asp Ser Ala Ser  
 115 120 125  
 Arg Asp Leu Trp Val Asn Ile Asp Gln Met Glu Lys Asp Lys Val Lys  
 130 135 140  
 Ile His Gly Ile Leu Ser Asn Thr His Arg Gln Ala Ala Arg Val Asn  
 145 150 155 160  
 Leu Ser Phe Asp Phe Pro Phe Tyr Gly His Phe Leu Asn Glu Val Thr

165	170	175
Val Ala Thr Gly	Gly Phe Ile Tyr	Thr Gly Glu Val Val His Arg Met
180	185	190
Leu Thr Ala Thr Gln Tyr Ile Ala Pro	Leu Met Ala Asn Phe Asp Pro	
195	200	205
Ser Val Ser Arg Asn Ser	Thr Val Arg Tyr Phe Asp Asn Gly Thr Ala	
210	215	220
Leu Val Val Gln Trp Asp His Val His	Leu Gln Asp Asn Tyr Asn Leu	
225	230	235
Gly Ser Phe Thr Phe Gln Ala Thr	Leu Leu Met Asp Gly Arg Ile Ile	
245	250	255
Phe Gly Tyr Lys Glu Ile Pro Val	Leu Val Thr Gln Ile Ser Ser Thr	
260	265	270
Asn His Pro Val Lys Val Gly	Leu Ser Asp Ala Phe Val Val Val His	
275	280	285
Arg Ile Gln Gln Ile Pro Asn Val Arg	Arg Arg Arg Thr Ile Tyr Glu Tyr	
290	295	300
His Arg Val Glu Leu Gln Met Ser	Lys Ile Thr Asn Ile Ser Ala Val	
305	310	315
Glu Met Thr Pro Leu Pro Thr Cys	Leu Gln Phe Asn Gly Cys Gly Pro	
325	330	335
Cys Val Ser Ser Gln Ile Gly	Phe Asn Cys Ser Trp Cys Ser Lys Leu	
340	345	350
Gln Arg Cys Ser Ser Gly	Phe Asp Arg His Arg Gln Asp Trp Val Asp	
355	360	365
Ser Gly Cys Pro Glu Glu Val	Gln Ser Lys Glu Lys Met Cys Glu Lys	
370	375	380
Thr Glu Pro Gly Glu Thr	Ser Gln Thr Thr Thr Ser His Thr Thr	
385	390	395
Thr Met Gln Phe Arg Val	Leu Thr Thr Arg Arg Ala Val Thr Ser	
405	410	415
Gln Met Pro Thr Ser Leu Pro	Thr Glu Asp Asp Thr Lys Ile Ala Leu	
420	425	430
His Leu Lys Asp Ser Gly	Ala Ser Thr Asp Asp Ser Ala Ala Glu Lys	
435	440	445
Lys Gly Gly Thr Leu His	Ala Gly Leu Ile Val Gly Ile Leu Ile Leu	
450	455	460
Val Leu Ile Ile Ala Ala	Ile Leu Val Thr Val Tyr Met Tyr His	
465	470	475
His Pro Thr Ser Ala Ala Ser	Ile Phe Phe Ile Glu Arg Arg Pro Ser	
485	490	495
Arg Trp Pro Ala Met Lys Phe Arg	Arg Gly Ser Gly His Pro Ala Tyr	
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Gln Cys		
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 35 40 45  
 Lys Ser Gly Ser Val Leu His His Trp Asn Glu Ile Tyr Tyr Phe Val  
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 Glu Gln Leu Ala His Arg Phe Ile Ser Pro Gln Leu Arg Met Ser Phe  
 65 70 75 80  
 Ile Val Phe Ser Thr Arg Gly Thr Thr Leu Met Lys Leu Thr Glu Asp  
 85 90 95  
 Arg Glu Gln Ile Arg Gln Gly Leu Glu Glu Leu Gln Lys Val Leu Pro  
 100 105 110  
 Gly Gly Asp Thr Tyr Met His Glu Gly Phe Glu Arg Ala Ser Glu Gln  
 115 120 125  
 Ile Tyr Tyr Glu Asn Ser Gln Gly Tyr Arg Thr Ala Ser Val Ile Ile  
 130 135 140  
 Ala Leu Thr Asp Gly Glu Leu His Glu Asp Leu Phe Phe Tyr Ser Glu  
 145 150 155 160  
 Arg Glu Ala Asn Arg Ser Arg Asp Leu Gly Ala Ile Val Tyr Cys Val  
 165 170 175  
 Gly Val Lys Asp Phe Asn Glu Thr Gln Leu Ala Arg Ile Ala Asp Ser  
 180 185 190  
 Lys Asp His Val Phe Pro Val Asn Asp Gly Phe Gln Ala Leu Gln Gly  
 195 200 205  
 Ile Ile His Ser Ile Leu Lys Lys Ser Cys Ile Glu Ile Leu Ala Ala  
 210 215 220  
 Glu Pro Ser Thr Ile Cys Ala Gly Glu Ser Phe Gln Val Val Val Arg  
 225 230 235 240  
 Gly Asn Gly Phe Arg His Ala Arg Asn Val Asp Arg Val Leu Cys Ser  
 245 250 255

Phe Lys Ile Asn Asp Ser Val Thr Leu Asn Glu Lys Pro Phe Ala Val  
 260 265 270  
 Glu Asp Thr Tyr Leu Leu Cys Pro Ala Pro Ile Leu Lys Glu Val Gly  
 275 280 285  
 Met Lys Ala Ala Leu Gln Val Ser Met Asn Asp Gly Leu Ser Phe Ile  
 290 295 300  
 Ser Ser Ser Val Ile Ile Thr Thr His Cys Ser Asp Gly Ser Ile  
 305 310 315 320  
 Leu Ala Ile Ala Leu Leu Val Leu Phe Leu Leu Ala Leu Ala Leu  
 325 330 335  
 Leu Trp Trp Phe Trp Pro Leu Cys Cys Thr Val Ile Ile Lys Glu Val  
 340 345 350  
 Pro Pro Pro Val Glu Glu Ser Glu Glu Asp Asp Asp Gly Leu  
 355 360 365  
 Pro Lys Lys Lys Trp Pro Thr Val Asp Ala Ser Tyr Tyr Gly Gly Arg  
 370 375 380  
 Gly Val Gly Gly Ile Lys Arg Met Glu Val Arg Trp Gly Glu Lys Gly  
 385 390 395 400  
 Ser Thr Glu Glu Gly Ala Lys Leu Glu Lys Ala Lys Asn Ala Arg Val  
 405 410 415  
 Lys Met Pro Glu Gln Glu Tyr Glu Phe Pro Glu Pro Arg Asn Leu Asn  
 420 425 430  
 Asn Asn Met Arg Arg Pro Ser Ser Pro Arg Lys Trp Tyr Ser Pro Ile  
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 Lys Gly Lys Leu Asp Ala Leu Trp Val Leu Leu Arg Lys Gly Tyr Asp  
 450 455 460  
 Arg Val Ser Val Met Arg Pro Gln Pro Gly Asp Thr Gly Arg Cys Ile  
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 Asn Phe Thr Arg Val Lys Asn Ser Gln Pro Ala Lys Tyr Pro Leu Asn  
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 Pro Pro Pro Ala Pro His Cys Pro Pro Pro Ala Pro Ser Ala Pro Thr  
 515 520 525  
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 Ser Val

<210> 302  
 <211> 2690  
 <212> DNA  
 <213> Mouse

<400> 302

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cactgctaca	gcatctcacc	gag	cttgc	tttgc	at	accat	2640
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<210> 303

<211> 162

<212> PRT

<213> Mouse

<400> 303

Met	Asn	Pro	Ala	Ile	Ser	Val	Ala	Leu	Leu	Leu	Ser	Val	Leu	Gln	Val
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Ser	Arg	Gly	Gln	Lys	Val	Thr	Ser	Leu	Thr	Ala	Cys	Leu	Val	Asn	Gln
				20				25					30		
Asn	Leu	Arg	Leu	Asp	Cys	Arg	His	Glu	Asn	Asn	Thr	Lys	Asp	Asn	Ser
				35				40				45			
Ile	Gln	His	Glu	Phe	Ser	Leu	Thr	Arg	Glu	Lys	Arg	Lys	His	Val	Leu
				50				55				60			
Ser	Gly	Thr	Leu	Gly	Ile	Pro	Glu	His	Thr	Tyr	Arg	Ser	Arg	Val	Thr
				65				70				75			80
Leu	Ser	Asn	Gln	Pro	Tyr	Ile	Lys	Val	Leu	Thr	Leu	Ala	Asn	Phe	Thr
				85				90				95			
Thr	Lys	Asp	Glu	Gly	Asp	Tyr	Phe	Cys	Glu	Leu	Gln	Val	Ser	Gly	Ala
				100				105				110			
Asn	Pro	Met	Ser	Ser	Asn	Lys	Ser	Ile	Ser	Val	Tyr	Arg	Asp	Lys	Leu
				115				120				125			
Val	Lys	Cys	Gly	Gly	Ile	Ser	Leu	Leu	Val	Gln	Asn	Thr	Ser	Trp	Met
				130				135				140			
Leu	Leu	Leu	Leu	Leu	Ser	Leu	Ser	Leu	Leu	Gln	Ala	Leu	Asp	Phe	Ile
				145				150				155			160
Ser	Leu														

<210> 304  
<211> 4588  
<212> DNA  
<213> Mouse

<400> 304

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<210> 305  
 <211> 1479  
 <212> PRT  
 <213> Mouse

<400> 305

Met	Val	Pro	Ile	Arg	Pro	Ala	Leu	Ala	Pro	Trp	Pro	Arg	His	Leu	Leu
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Arg	Cys	Val	Leu	Leu	Leu	Gly	Gly	Leu	Arg	Leu	Gly	His	Pro	Ala	Asp
							20			25				30	
Ser	Ala	Ala	Ala	Leu	Leu	Glu	Pro	Asp	Val	Phe	Leu	Ile	Phe	Ser	Gln
							35			40				45	
Gly	Met	Gln	Gly	Cys	Leu	Glu	Ala	Gln	Gly	Val	Gln	Val	Arg	Val	Thr
							50			55				60	
Pro	Phe	Cys	Asn	Ala	Ser	Leu	Pro	Ala	Gln	Arg	Trp	Lys	Trp	Val	Ser
65							70			75				80	
Arg	Asn	Arg	Leu	Phe	Asn	Leu	Gly	Ala	Thr	Gln	Cys	Leu	Gly	Thr	Gly
							85			90				95	
Trp	Pro	Val	Thr	Asn	Thr	Thr	Val	Ser	Leu	Gly	Met	Tyr	Glu	Cys	Asp
							100			105				110	
Arg	Glu	Ala	Leu	Ser	Leu	Arg	Met	Ala	Val	Ser	Tyr	Thr	Arg	Gly	Pro
							115			120				125	
Val	Val	Pro	Ala	Ser	Gly	Gly	Ser	Cys	Lys	Gln	Cys	Ile	Gln	Ala	Trp
							130			135				140	
His	Leu	Glu	Arg	Gly	Asp	Gln	Thr	Arg	Ser	Gly	His	Trp	Asn	Ile	Tyr
145							150			155				160	
Gly	Ser	Glu	Glu	Asp	Leu	Cys	Ala	Arg	Pro	Tyr	Tyr	Glu	Val	Tyr	Thr
							165			170				175	
Ile	Gln	Gly	Asn	Ser	His	Gly	Lys	Pro	Cys	Thr	Ile	Pro	Phe	Lys	Tyr
							180			185				190	
Asp	Asn	Gln	Trp	Phe	His	Gly	Cys	Thr	Ser	Thr	Gly	Arg	Glu	Asp	Gly
							195			200				205	
His	Leu	Trp	Cys	Ala	Thr	Thr	Gln	Asp	Tyr	Gly	Lys	Asp	Glu	Arg	Trp
							210			215				220	
Gly	Phe	Cys	Pro	Ile	Lys	Ser	Asn	Asp	Cys	Glu	Thr	Phe	Trp	Asp	Lys
225							230			235				240	
Asp	Gln	Leu	Thr	Asp	Ser	Cys	Tyr	Gln	Phe	Asn	Phe	Gln	Ser	Thr	Leu
							245			250				255	

Ser Trp Arg Glu Ala Trp Ala Ser Cys Glu Gln Gln Gly Ala Asp Leu  
 260 265 270  
 Leu Ser Ile Thr Glu Ile His Glu Gln Thr Tyr Ile Asn Gly Leu Leu  
 275 280 285  
 Thr Gly Tyr Ser Ser Thr Leu Trp Ile Gly Leu Asn Asp Leu Asp Thr  
 290 295 300  
 Ser Gly Gly Trp Gln Trp Ser Asp Asn Ser Pro Leu Lys Tyr Leu Asn  
 305 310 315 320  
 Trp Glu Ser Asp Gln Pro Asp Asn Pro Gly Glu Glu Asn Cys Gly Val  
 325 330 335  
 Ile Arg Thr Glu Ser Ser Gly Gly Trp Gln Asn His Asp Cys Ser Ile  
 340 345 350  
 Ala Leu Pro Tyr Val Cys Lys Lys Pro Asn Ala Thr Val Glu Pro  
 355 360 365  
 Ile Gln Pro Asp Arg Trp Thr Asn Val Lys Val Glu Cys Asp Pro Ser  
 370 375 380  
 Trp Gln Pro Phe Gln Gly His Cys Tyr Arg Leu Gln Ala Glu Lys Arg  
 385 390 395 400  
 Ser Trp Gln Glu Ser Lys Arg Ala Cys Leu Arg Gly Gly Asp Leu  
 405 410 415  
 Leu Ser Ile His Ser Met Ala Glu Leu Phe Ile Thr Lys Gln Ile  
 420 425 430  
 Lys Gln Glu Val Glu Glu Leu Trp Ile Gly Leu Asn Asp Leu Lys Leu  
 435 440 445  
 Gln Met Asn Phe Glu Trp Ser Asp Gly Ser Leu Val Ser Phe Thr His  
 450 455 460  
 Trp His Pro Phe Glu Pro Asn Asn Phe Arg Asp Ser Leu Glu Asp Cys  
 465 470 475 480  
 Val Thr Ile Trp Gly Pro Glu Gly Arg Trp Asn Asp Ser Pro Cys Asn  
 485 490 495  
 Gln Ser Leu Pro Ser Ile Cys Lys Lys Ala Gly Arg Leu Ser Gln Gly  
 500 505 510  
 Ala Ala Glu Asp His Asp Cys Arg Lys Gly Trp Thr Trp His Ser  
 515 520 525  
 Pro Ser Cys Tyr Trp Leu Gly Glu Asp Gln Val Ile Tyr Ser Asp Ala  
 530 535 540  
 Arg Arg Leu Cys Thr Asp His Gly Ser Gln Leu Val Thr Ile Thr Asn  
 545 550 555 560  
 Arg Phe Glu Gln Ala Phe Val Ser Ser Leu Ile Tyr Asn Trp Glu Gly  
 565 570 575  
 Glu Tyr Phe Trp Thr Ala Leu Gln Asp Leu Asn Ser Thr Gly Ser Phe  
 580 585 590  
 Arg Trp Leu Ser Gly Asp Glu Val Ile Tyr Thr His Trp Asn Arg Asp  
 595 600 605  
 Gln Pro Gly Tyr Arg Arg Gly Gly Cys Val Ala Leu Ala Thr Gly Ser  
 610 615 620  
 Ala Met Gly Leu Trp Glu Val Lys Asn Cys Thr Ser Phe Arg Ala Arg  
 625 630 635 640  
 Tyr Ile Cys Arg Gln Ser Leu Gly Thr Pro Val Thr Pro Glu Leu Pro  
 645 650 655  
 Gly Pro Asp Pro Thr Pro Ser Leu Thr Gly Ser Cys Pro Gln Gly Trp  
 660 665 670  
 Val Ser Asp Pro Lys Leu Arg His Cys Tyr Lys Val Phe Ser Ser Glu  
 675 680 685  
 Arg Leu Gln Glu Lys Lys Ser Trp Ile Gln Ala Leu Gly Val Cys Arg  
 690 695 700  
 Glu Leu Gly Ala Gln Leu Leu Ser Leu Ala Ser Tyr Glu Glu Glu His  
 705 710 715 720  
 Phe Val Ala His Met Leu Asn Lys Ile Phe Gly Glu Ser Glu Pro Glu  
 725 730 735  
 Ser His Glu Gln His Trp Phe Trp Ile Gly Leu Asn Arg Arg Asp Pro

740	745	750
Arg Glu Gly His Ser Trp Arg Trp Ser Asp Gly Leu	Gly Phe Ser Tyr	
755	760	765
His Asn Phe Ala Arg Ser Arg His Asp Asp Asp Asp	Ile Arg Gly Cys	
770	775	780
Ala Val Leu Asp Leu Ala Ser Leu Gln Trp Val Pro	Met Gln Cys Gln	
785	790	795
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Thr Gln Leu Asp Trp Ile Cys Lys Ile Pro Arg Gly	Val Asp Val Arg	
805	810	815
Glu Pro Asp Ile Gly Arg Gln Gly Arg Leu Glu Trp	Val Arg Phe Gln	
820	825	830
Glu Ala Glu Tyr Lys Phe Phe Glu His His Ser Ser	Trp Ala Gln Ala	
835	840	845
Gln Arg Ile Cys Thr Trp Phe Gln Ala Asp Leu	Thr Ser Val His Ser	
850	855	860
Gln Ala Glu Leu Gly Phe Leu Gly Gln Asn Leu	Gln Lys Leu Ser Ser	
865	870	875
880		
Asp Gln Glu Gln His Trp Trp Ile Gly Leu His Thr	Leu Glu Ser Asp	
885	890	895
Gly Arg Phe Arg Trp Thr Asp Gly Ser Ile Ile Asn	Phe Ile Ser Trp	
900	905	910
Ala Pro Gly Lys Pro Arg Pro Ile Gly Lys Asp Lys	Lys Cys Val Tyr	
915	920	925
Met Thr Ala Arg Gln Glu Asp Trp Gly Asp Gln	Arg Cys His Thr Ala	
930	935	940
Leu Pro Tyr Ile Cys Lys Arg Ser Asn Ser Ser	Gly Glu Thr Gln Pro	
945	950	955
960		
Gln Asp Leu Pro Pro Ser Ala Leu Gly Gly Cys	Pro Ser Gly Trp Asn	
965	970	975
Gln Phe Leu Asn Lys Cys Phe Arg Ile Gln Gly Gln	Asp Pro Gln Asp	
980	985	990
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Gln Leu Val Thr Ile Ala Asn Pro Leu Glu Gln	Ala Phe Ile Thr Ala	
1010	1015	1020
Ser Leu Pro Asn Val Thr Phe Asp Leu Trp Ile	Gly Leu His Ala Ser	
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Trp Ala Pro Gly Glu Pro Ser Gly Pro Ser Pro	Ala Pro Ser Gly Thr	
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Lys Pro Thr Ser Cys Ala Val Ile Leu His Ser	Pro Ser Ala His Phe	
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Thr Gly Arg Trp Asp Asp Arg Ser Cys Thr	Glu Glu Thr His Gly Phe	
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Ile Cys Gln Lys Gly Thr Asp Pro Ser Leu	Ser Pro Ser Pro Ala Ala	
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Arg Leu Leu Gln Lys Pro Leu Arg Trp Lys Asp	Ala Leu Leu Cys	
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Glu Ser Arg Asn Ala Ser Leu Ala His Val Pro	Asp Pro Tyr Thr Gln	
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Ala Phe Leu Thr Gln Ala Ala Arg Gly Leu Gln	Thr Pro Leu Trp Ile	
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Gly Leu Ala Ser Glu Glu Gly Ser Arg Arg	Tyr Ser Trp Leu Ser Glu	
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Gly Gly Cys Ala Tyr Val Asp Val Asp Gly	Thr Trp Arg Thr Thr Ser	
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Tyr	Thr	Val	Gln	Gln	Tyr	Glu	Asn	Glu	Glu	Gly	Lys	Trp	Val	Leu	Ile
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Thr Gly Ile Cys Ser Asp Val Ser Pro Thr Phe Gln Val Val Asn Ser			
145	150	155	160
Phe Ala Pro Val Gln Glu Cys Ser Thr Gln Leu Asp Ile Val Ile Val			
165	170	175	
Leu Asp Gly Ser Asn Ser Ile Tyr Pro Trp Glu Ser Val Ile Ala Phe			
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Leu Asn Asp Leu Leu Lys Arg Met Asp Ile Gly Pro Lys Gln Thr Gln			
195	200	205	
Val Gly Ile Val Gln Tyr Gly Glu Asn Val Thr His Glu Phe Asn Leu			
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260	265	270	
Lys Lys Val Met Val Ile Val Thr Asp Gly Glu Ser His Asp Asn Tyr			
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Arg Leu Lys Gln Val Ile Gln Asp Cys Glu Asp Glu Asn Ile Gln Arg			
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Phe Ser Ile Ala Ile Leu Gly His Tyr Asn Arg Gly Asn Leu Ser Thr			
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Glu Lys Phe Val Glu Glu Ile Lys Ser Ile Ala Ser Glu Pro Thr Glu			
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Lys His Phe Phe Asn Val Ser Asp Glu Leu Ala Leu Val Thr Ile Val			
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370	375	380	
His Tyr Ser Gln Asp Trp Val Met Leu Gly Ala Val Gly Ala Tyr Asp			
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Trp Asn Gly Thr Val Val Met Gln Lys Ala Asn Gln Met Val Ile Pro			
405	410	415	
His Asn Thr Thr Phe Gln Thr Glu Pro Ala Lys Met Asn Glu Pro Leu			
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Ala Ser Tyr Leu Gly Tyr Thr Val Asn Ser Ala Thr Ile Pro Gly Asp			
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Val Leu Tyr Ile Ala Gly Gln Pro Arg Tyr Asn His Thr Gly Gln Val			
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Gly Gly Glu Gln Ile Gly Ser Tyr Phe Gly Ser Val Leu Thr Thr Ile			
485	490	495	
Asp Ile Asp Lys Asp Ser Tyr Thr Asp Leu Leu Leu Val Gly Ala Pro			
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Met Tyr Met Gly Thr Glu Lys Glu Glu Gln Gly Lys Val Tyr Val Tyr			
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Arg Gln Thr Cys Cys Ser Ser Leu Lys Asp Asn Ser Cys Thr Lys Glu			
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 Val Lys Asp Leu Asn Val Asp Gly Phe Asn Asp Val Val Ile Gly Ala  
 580 585 590  
 Pro Leu Glu Asp Asp His Ala Gly Ala Val Tyr Ile Tyr His Gly Ser  
 595 600 605  
 Gly Lys Thr Ile Arg Glu Ala Tyr Ala Gln Arg Ile Pro Ser Gly Gly  
 610 615 620  
 Asp Gly Lys Thr Leu Lys Phe Phe Gly Gln Ser Ile His Gly Glu Met  
 625 630 635 640  
 Asp Leu Asn Gly Asp Gly Leu Thr Asp Val Thr Ile Gly Gly Leu Gly  
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 Gly Ala Ala Leu Phe Trp Ala Arg Asp Val Ala Val Val Lys Val Thr  
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 Met Asn Phe Glu Pro Asn Lys Val Asn Ile Gln Lys Lys Asn Cys Arg  
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 Val Glu Gly Lys Glu Thr Val Cys Ile Asn Ala Thr Met Cys Phe His  
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 Val Lys Leu Lys Ser Lys Glu Asp Ser Ile Tyr Glu Ala Asp Leu Gln  
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 Tyr Arg Val Thr Leu Asp Ser Leu Arg Gln Ile Ser Arg Ser Phe Phe  
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 Ser Val Ala Ala Asn Glu Thr Ile Pro Glu Phe Ile Asn Ser Thr Glu  
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 Asp Ile Gly Asn Glu Ile Asn Val Phe Tyr Thr Ile Arg Lys Arg Gly  
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 His Phe Pro Met Pro Glu Leu Gln Leu Ser Ile Ser Phe Pro Asn Leu  
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 Thr Ala Asp Gly Tyr Pro Val Leu Tyr Pro Ile Gly Trp Ser Ser Ser  
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